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In the Winter of 1966-67, the National Association of Educational Broadcasters (NAEB) made a survey of 320 educational radio stations requesting detailed information about budgets, types of programing, hours of service, station facilities, and future plans and needs. The data from this survey, based on the questionnaires returned by 135 stations, documents the broad overview of this report. Educational radio's greatest potential service to schools, professional people, commercial stations, the socially disadvantaged, and the community in general has been severely limited by low budgets, small staffs, and a lack of both audience research and program promotion. The National Educational Radio Network (NERN), which distributes tapes of programs to its 150 affiliate stations, offered 1,895 programs (31,371 hours of broadcasting) in 1966, yet the survey determined that the average station operates on an annual budget of less than $25,000. Appendices include statistics gathered in the survey; a sampling of organizations and commercial stations served; a list of educational radio stations; a few in-depth profiles of typical stations; and a report on the third phase of the Educational Communications Systems Study which is being designed to interconnect electronically a group of American colleges and universities. (JY)

THE HIDDEN MEDIUM: EDUCATIONAL RADIO

A Status Report

prepared for
National Educational Radio,
a division of
The National Association of Educational Broadcasters,
with the aid of a grant from
The Ford Foundation

ED025151

HERMAN W. LAND ASSOCIATES, INC. • NEW YORK

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INTRODUCTION

EDUCATIONAL RADIO: THE BROAD PERSPECTIVE

By Jerrold Sandler

Executive Director, National Educational Radio

Marconi transmitted radio signals in 1895 and DeForest put Enrico Caruso on the air in 1910. There is some dispute as to which broadcasting station was the first to go on the air in the United States, but all of the claims generally can be traced to the year 1920. It was in 1919 that the first educational radio station -- WHA, at the University of Wisconsin in Madison, began experimental operation as 9XM. Its present call letters date from 1920-21. (That station is still on the air today and is, in fact, the originating point for a unique state network of 11 educational radio stations).

By 1925, 171 educational organizations had stations on the air. This was almost a third of all operating stations. Thus, the history of radio broadcasting in this country is, in its early stages, also the history of educational radio. It was not, as many believe, an afterthought, but the core of this country's earliest broadcasting operations. As the Federal Communications Commission said in its bulletin on "Educational Radio" published in September, 1966: "In its long history -- from the beginnings of broadcasting -- educational radio has served the public with cultural, educational and entertainment programs, and supplied students and teachers on all levels with instructional materials designed for classroom use."

But the growing number of commercial stations, in those early years, began to provide many of the services previously offered only by educational broadcasting, and many of the early educational radio stations began to leave the air. By 1937, only 38 remained.

This hiatus in the development of educational radio proved to be fleeting -- ending in 1938, with the authorization of FM broadcasting. One FM educational radio station went on the air in 1938, but the rate of growth increased strikingly in the years following the Second World War, and by the end of 1966, well over 300 educational radio stations held broadcast licenses. About one-fifth of these have gone on the air within the previous two and one-half years, and the number continues to grow each month.

In 1950, with the aid of a grant from The Kellog Foundation, the first national network of educational radio stations in the United States was established: the Tape Network of the National Association of Educational Broadcasters (NAEB). The Network was organized to distribute recorded programs -- offering at least 100 to 260 hours of programming over a nine to twelve month period, and in the case of many stations up to 500 or 600 hours per year. Within five years of its organization, the NAEB Tape Network became a self-sustaining (if modestly financed) operation. It provides many affiliates with programs beyond their formal agreement, as well as supplying programs to many commercial stations, non-affiliated educational stations, and other educational organizations.

In 1964 the National Association of Educational Broadcasters (NAEB) was reorganized to form a new divisional structure. One of the new divisions was National Educational Radio (NER). The new division combined the Tape Network -- renamed the National Educational Radio Network (NERN) -- and the Radio Station Division of the NAEB. Network headquarters remained at the University of Illinois in Urbana, and the NER headquarters was opened in Washington under the aegis of the NAEB.

In addition to program distribution, the new division was charged with representing educational radio in a variety of ways on the national and international level. Its functions include liaison with appropriate government agencies and the Congress; the raising of funds for national projects from both public and private sources; representing educational radio as a unified voice in professional circles on a variety of matters, ranging from copyright regulations to relations with other media; dispensing grants-in-aid for special national productions by local affiliates; creation and acquisition of high-quality programming for the Network, and the development of new sources of such material; providing consultation to member stations; publishing and distributing professional materials and, most recently, conducting research. Some 150 stations -- about half the educational radio stations in the country -- belong to NER. Other non-member stations often relate with NER on special projects. Membership in NER has increased steadily since its organization in 1964, averaging approximately two new member stations per month. During the first three months of 1967, eleven new members were added to NER's roster.

A number of significant strides were made within a short period after the establishment of NER. Very early, the first of several (annual) grants of $30,000 was made to NER by the National Home Library Foundation for the production of imaginative non-commercial radio programming. In announcing the grant, Foundation president Leonard Marks said, "In providing this continuing support, the Foundation recognizes the leadership role of NAEB through its National Educational Radio Network in providing the American people with programs not readily available through other sources."

Other developments were quick to follow. Grants from The Johnson Foundation of Racine, Wisconsin, made possible an extensive NER series based on the historic International Convocation to Study the Requirements for Peace, "Pacem in Terris," and other major series based on national and international gatherings of significance.

September, 1965 marked an historic event in the development of educational radio in the United States. For the first time in 44 years, some 70 NER stations were linked together in a live interconnection for three hours to broadcast coverage and the results of the German national elections. For a total cost of some $12,000, this special International Radio Network was made possible through the cooperation of NER, Radio Deutsche Welle in West Germany, Radio New York Worldwide and the German Information Center in New York City. The three major commercial radio networks asked for "feeds" from Radio New York Worldwide, which provided the technical facilities for the venture.

Commenting on this extraordinary broadcast in the Saturday Review, critic Robert Lewis Shayon said, "Even if a way is found to finance occasional international broadcasts, the whole point of NER's enterprising coverage of the German elections will be lost, unless there is a successful drive to create a permanent, national, live, educational radio network. The cost would be a pittance compared to the millions spent by the big networks. The contribution would be incalculable."

As NER moved into its second year, with these major innovations in programming under its belt, the organization's staff and Board of Directors realized that effective, organized measures needed to be taken to mobilize the vast and unique resources of radio to adequately serve the people of the United States. At the invitation of The Johnson Foundation, NER's Board of Directors met at Wingspread, the Foundation's conference center in Racine, Wisconsin, and decided to convene a national conference of leaders in many fields to discuss "Educationl Radio as a National Resource," and formulate an appropriate program of action. Many months were spent planning the conference, during which time NER continued to grow in both quantity and substance.

In September, 1966, the conference was convened at Wingspread, under the auspices of NER and The Johnson Foundation. Seventy leaders from industry, the communications media, government, the academic community, philanthrophy and the arts gathered to grapple with the critical problems facing the development of educational radio in its fifth decade of service to an increasingly complex and rapidly changing society. Participants agreed that educational radio faces a vital need for research data about itself, as well as for funds for logical expansion both in terms of capital improvements and the implementation of creative programming which would help it achieve its role as a vital medium.

Among the specific recommendations for immediate study and action as appropriate were the following:

1. That specific administrative and legislative steps be taken to facilitate public support for educational radio at the federal, state and local levels.

2. That educational radio be included in any proposals for the use of communications satellites for non-commercial broadcasting.

3. That a national production center for high-quality educational radio programs be established, and that the center also function to fill the current void in the training of personnel.

4. That citizens' advisory councils be established on the national and local levels to help formulate educational radio station policies, in the true spirit of "public radio."

5. That educational radio become more intensively involved in the significant social issues of the day.

6. That there be larger commitments of time and money to conduct independent research into the area of determining community needs and the ways in which educational radio might contribute to their resolution.

7. That an NER public affairs and news bureau be established in Washington, D.C. to help establish National Educational Radio as a more effective medium in the reporting of government affairs.

The NER Board of Directors convened at the conclusion of the Wingspread Conference, and took specific steps to implement the recommendations which had been made. Herman W. Land, formerly editor of Television Magazine and executive of the Westinghouse and Corinthian Broadcasting Companies, was retained to assist in the planning of an action program.

Less than a month after the Wingspread Conference, an informal evaluation group consisting largely of conference participants, was organized and met in New York City. Members included: Dr. Carroll Newsom, Vice President, Education, Radio Corporation of America; Russell Jalbert, Vice President for University Affairs, Boston University; Eugene King, Director of Radio Communications, State University of New York; Melvyn Bloom, of Murden and Company, public affairs consultants, and a former member of The Johnson Foundation staff; Howard Kany, Director, International Business Relations, CBS Television; Sam Slate, Executive Vice President and Assistant to the President of RKO General Broadcasting; Arnold Bloom, Hill and Knowlton, Inc., and Bert Cowlan of Urban America, Inc., former Director of Community Relations, Westinghouse Broadcasting Company; Estelle Linzer, formerly with the United Nations Association, who acted as Wingspread Conference Coordinator, Herman Land and myself.

The task force recommended strongly that NER, as a first, most basic step, develop a research plan to give an accurate picture of the true scope of educational radio in the United States. It was unanimously agreed that this development of research data on the problems, achievements and potentials of educational radio was a vital first priority. The group felt strongly that this documentation would be needed as a basis for support through legislation and from private sources as well, and that the development of other recommendations of the Wingspread Conference rested solidly upon this research foundation.

With the help of Land Associates, NER set about the task, and developed an extensive 25-page questionnaire which was mailed to every educational radio licensee in the United States. The questionnaire deals in depth with every aspect of educational radio. By March, 1967, 135 completed questionnaires had been returned; approximately 50 field interviews had been conducted, and regional meetings had been held to encourage the development of documentation from the various stations and institutions involved.

Subsequently, the Ford Foundation awarded a grant of $38,000 to the NAEB, to enable NER to complete this comprehensive study. The grant allowed for the tabulation and reporting of the research data to provide an objective documentation of the need for federal financial support for educational radio. This study covers virtually all aspects of the field, including station organization, the relationships of stations to their communities, data regarding the areas served by educational stations, the means by which stations determine listeners' needs and promote station activities, present and future budgetary requirements and sources of financing, technical details concerning station equipment and operating facilities, personnel, etc.

Commenting on the timeliness of the NER research project, the results of which are contained in this report, Ford Foundation advisor Fred W. Friendly said: "The beautiful thing about a world that has communications satellites providing electronic turnpikes in the sky is the happy fact that they can handle a multitude of traffic. Educational television will show us the picture; educational radio will stir our imagination. Together, they can --

and must -- play a dynamic part in the communications revolution. I'm delighted to see educational radio's new forward thrust."

E. G. Burrows, Chairman of the Board of Directors of the National Association of Educational Broadcasters, said that, "As an association devoted to all facets of educational broadcasting, we welcome this opportunity to develop educational radio as a viable national resource. We are particularly pleased that President Johnson in his message to Congress saw fit to include support for educational radio for the first time, along with his continuing support of ETV."

Educational broadcasting is receiving unparalleled attention at the moment, Mr. Burrows pointed out -- with imaginative proposals such as the Ford Foundation communications satellite plan, the Carnegie Commission Report on Educational Television and the President's far-reaching education message, which calls for support of both media -- all emerging within a relatively short period of time.

In his Message to Congress on Education and Health in America, President Johnson said, "Practically all non-commercial stations have serious shortages of the facilities, equipment, money and staff they need to present programs of high quality. There are not enough stations. Interconnections between stations are inadequate and seldom permit the timely scheduling of current programs."

Clearly, the climate has never been better, nor the timing more crucial for educational radio to come into its own, and begin at long last to develop its incredibly rich, untapped potential as a great national public resource - a resource which Jack Gould of the New York Times recently called " an oasis of civilized relief."

The preparation of this report, and the long chain of circumstances which led to the process of preparation, has been a story of dedication, devotion, good will and great physical and mental stamina on the part of a large number of practitioners and friends of educational radio.

A large measure of our gratitude goes to the Board of Directors of National Educational Radio, whose faith has been our strength. They are: Jack Burke, Manager, KSAC, Kansas State University, who is the current Chairman of the NER Board, and represents the ration stations in NAEB's Region V; E. G. Burrows, Manager, WUOM/WVGR, The University of Michigan, who is now the Chairman of the joint Board of Directors of the NAEB, and formerly NER Board Chairman (Region III); Will Lewis, Manager, WBUR, Boston University (Region I); Mrs. Marjorie Newman, Program Director, WFSU, Florida State University (Region II); Myron Curry, Manager, KFJM, University of North Dakota (Region IV); and

Burt Harrison, Manager, KWSC, Washington State University (Region VI).

An equal measure of thanks is due to the former NER Board members who were active participants during this crucial period: Martin Busch, Manager, KUSD, University of South Dakota; Frank W. Norwood, now with the National Center for School and College Television; Jack D. Summerfield, Manager, WRVR, The Riverside Church, New York City; John P. Witherspoon, Manager, KEBS, San Diego State College; and Albert P. Freddette, Manager, WAMC, Albany, New York.

We are also grateful to the Board of Trustees of The Johnson Foundation and to Leslie Paffrath, its President, for that institution's vision, trust and courage in supporting a casue which had yet to be proven. A special note of thanks goes to Melvyn Bloom, formerly of the Foundation staff, for his continuing and generous assistance to our overall effort.

And of course it was the Ford Foundation grant which made it possible for this project to be translated into reality. Because of this leadership, it may now be possible for educational radio to play its proper role in the future development of a national communications system in the United States.

As in all ventures of this kind, there are many individuals who made significant contributions above and beyond the call of duty. Among them are: John Bystrom, Dean Coston, Richard Doan, William G. Harley and the rest of the NAEB staff, Robert L. Hilliard, Russell Jalbert, Eugene King, Estelle Linzer, Morris Novik, Robert Lewis Shayon, Charles A. Siepmann, Raymond Stanley, John P. Witherspoon and Rose Blythe Kemp.

Since this project deeply involved the educational radio stations themselves, it is important to recognize the efforts of the NER membership, and all those managers who spent so many arduous hours preparing the questionnaire and special reports. Their devotion has not been of the sort which expresses itself in lip service to a good cause, but a zealous and persistent devotion, which could be borne only of sincere conviction. Likewise, our gratitude is sincere and its expression deeply felt.

A vigorous word of thanks must go to Herman W. Land, and his associates, Leon Morse and Bert Cowlan, for their faithful and highly competent work on this project. And a final note of admiration and gratitude to Miss Lucinda K. Landreth, NER's Administrative Assistant, for her dedication, indefatigable energy, and remarkable patience.

All of these people have been -- in the words of Charles A. Siepmann at the "Wingspread Conference on Educational Radio as a National Resource," -- "Thepioneers of a grand design."

PREFACE

This report is based on a survey conducted during the Winter of 1966-67. A 25-page questionnaire containing 112 questions together with requests for special reports and exhibits, was mailed to 320 educational radio stations throughout the United States (the total universe consists of 346). Returns were received from 135, or 42% of those surveyed. In addition, nearly 50 field and telephone interviews were held with the station managers, as well as discussions with many others in the field.

Charles Harriman Smith played a major role in the development of the questionnaire, bringing more than 30 years of rich broadcast research experience to the task. The coding, tabulating and analysis of all the information, and preparation of the tables, derived from the questionnaires returned was done for Land Associates by Trend Finders, Inc., an independent market and social research organization in New York City. Phillip S. Gelb, V.P.-Director of Research for Trend Finders, supervised the work of analysis, which was conducted by Milton Brooks and his able and hard-working assistants -- Renee Miller, Lucretia Stander and Gloria Sugerman.

My associate Bert Cowlan devoted his boundless energies to shepherding the entire project through the complex, endless process beginning with the development of the questionnaire and ending with the final appearance of the bound copies. Our associate Leon Morse likewise lived through it from the start, conducting most of the field interviews, writing and editing the greater portion of the manuscript.

Carrying the bulk of the two-shift secretarial-production load was the marvelously competent Sally Simpson, together with Gloria Lenihan, Catherine Ungaro and Joanna Barnes.

Tried and true friends of educational radio Melvin Bloom, Frank Norwood and John Witherspoon were among those who made important editorial contributions, as did Arnold Hartley, a forward-looking broadcaster sensitive to the needs of America's minorities. Another member of the communications field whose continuing counsel proved most helpful was my old friend and former colleague Melvin A. Goldberg, former V.P.-Research

Director of the National Association of Broadcasters and Director of Research for Group W, the Westinghouse Broadcasting Company, and now V. P. of John Blair & Company.

Most helpful, too, were the experience and counsel of Jerrold Sandler, Executive Director of National Educational Radio; E. G. Burrows, Chairman of the Board of the National Association of Educational Broadcasters: Jack Burke, Chairman of the Board of NER, together with the other members of the Board, both this year's and last. However, the conclusions and observations of this study are those of Land Associates, which bears full responsibility for what appears in this volume. It should be noted, that as the first of its kind in the field, this study had a limited objective: to begin to measure the dimensions of what had been previously an almost completely unmeasured medium.

That it could not have been completed without the grant from the Ford Foundation is an elementary truth of such importance to the entire enterprise that no declaration of gratitude, however impassioned, can give adequate voice to the feeling of a great many people.

A very special word of thanks must go to that great and generous spirit, Morris Novik, who, at a critical moment, made it possible for us all to continue.

Herman W. Land

THE HIDDEN MEDIUM

A Status Report on Educational Radio in the United States

Overview and Summary

The oldest of the electronic media, going back in service to experimental beginnings as station 9xm in the year 1919, educational radio, almost a half century later, remains virtually unknown as a communications force in its own right. Overshadowed first by commercial radio, then by television, it has suffered long neglect arising from disinterest and apathy among the educational administrators who control much of its fortunes. As a result, it lacks cohesion as a medium, its purposes are varied and often confused, and it struggles for the beginnings of recognition as a potentially valuable national resource. Yet somehow it manages not only to survive and fill its traditional cultural role, but to move forward, innovate, experiment.

Indeed, there are signs that educational radio has begun at last to respond with a budding aggressiveness to the almost overwhelming challenge posed by television; like its commercial counterpart of a decade earlier, it is awakening to the realization that no one medium can be all things to all men all the time, that there is a legitimate important role that it, too, can play in this complex, changing American society. A sense of restlessness among the station managements is noticeable, as though long submerged dreams were being allowed once more to rise to the surface.

What accounts for the signs of ferment, the sense of things about to happen, the passionate and dedicated efforts of its leadership? The causes would seem to lie somewhere in the general forward thrust of the economy, the emergence of new educational technologies in time to coincide with the student population explosion.

Radio Must Meet the Needs of the Total Society

Two basic observations may be made about this period of change which appears to be in its beginning phase:

1. It is marked by a growing awareness within educational radio ranks that just as education itself has long ceased to be a matter of cultural enrichment for the privileged minority, so the medium can only rise to the future by broadening the base of its service to enable it to respond to the developing needs of the total society. Thus, while it can be expected to continue to serve the needs of those already well endowed with the gifts of time, aptitude and interest for things

cultural, educational radio is beginning to bestir itself on behalf of the special groups within the society, such as the disadvantaged, the elderly, the minorities, etc., for whom it appears uniquely equipped to fill the media vacuum that generally prevails.

2. A striking feature of the new educational radio scene is its movement in almost direct opposition to the current development in commercial radio. Where, to meet the inexorable competition of television, commercial radio has transformed itself into a local medium, with a steady diminution of network service, educational radio is moving impatiently toward the day of full live network operations. At a time when the scale of commercial network news bureau operation declines in Washington, educational radio brings into being an NER Washington Public Affairs Bureau; in a period which sees long-standing regional networks dissolved by the commercial medium, new plans for state-wide networks are being developed and enthusiastically pushed by educational radio. In this connection, it may be significant that in the face of virtual absence of commercial radio from the Washington satellite discussions, educational radio's spokesmen participated in enthusiastic anticipation of the new possibilities they see being opened up to them by the world-binding channels in the sky. This is in no way said to disparage the commercial field, but to point to differences in outlook that reflect profoundly different concepts of the primary function of broadcasting in the coming years. From this point of view, the two aural media appear far more complementary than competitive.

The Study Itself a Reflection of the Change

The fact that NER and its membership saw fit to engage in the first major documentation of the educational radio story ever undertaken, that the Ford Foundation was prepared to underwrite the research with a generous grant, that the medium has for the first time appeared in a Presidential message on education and has gone on to become part of the national discussion on new legislation, is in itself a reflection of the change that is occurring.

This research began in December with a mailing of a questionnaire to every station in the United States. Of the 320 stations sent questionnaires, 135 responded; in addition, field interviews were held either in person or by telephone with nearly fifty individuals representing fifty stations and discussions held with many more. The study sought to obtain a comprehensive picture of educational radio as it now functions in this country. Subjects covered included: administration, budgets, operations, research, staffing, programming, equipment, as well as plans for the future.

A Many-Storied Mansion

Any attempt to deal with educational radio as one medium must fail since it is many media in one, like a mansion with many stories, each one of which has its own function and style yet is related by the overall design of the building to its total requirements. Educational radio is direct and supplementary instruction, cultural enrichment, informal adult education, general information; and on any one day, or throughout the year it may be any one of these, or a blending of them all.

It is the classical music station which brings the best in music to a locality which otherwise might be without it; the agricultural station which presents but little music, but which is depended upon for expert information about farming; the in-school station that parents listen to so they can know what their child is being taught; the community station that goes out to seek community groups so they can appear on its air waves.

In this many-storied mansion of educational radio, there were a total of 346 stations at the beginning of April, 1967, with construction permits granted to 18 more and 20 more applications pending before the Federal Communications Commission. Of these 346, 311 use the reserved FM band, 15 use the non-reserved FM band, and 20 are AM stations. Most FM stations are located between 88.1 and 91.9 megacycles, the band reserved for educational use.

Without the development of FM, in all likelihood the resurgence of educational radio would never have begun. The table below clearly shows that educational FM radio is a post-war phenomenon. It demonstrates the growth of such FM stations.

1938 - 1
1939 - 2
1940 - 4
1941 - 7
1942 - 8
1943 - 8
1944 - 8
1945 - 9
1946 - 10
1947 - 17

1948 - 29
1949 - 48
1950 - 73
1951 - 85
1952 - 98
1953 - 112
1954 - 122
1955 - 123
1956 - 125
1957 - 141

1958 - 151
1959 - 159
1960 - 175
1961 - 194
1962 - 209
1963 - 237
1964 - 255
1965 - 269
1966 - 292 (Sept. 1)
1967 - 326 (April)

(Source: Federal Communications Commission)

Many of these (134) are 10-Watt, low power, FM stations. They throw a signal a distance of two to five miles and are thus limited in the service they can provide.

There remain, according to the Federal Communications Commission, 20 AM educational radio stations. These, for the most part, are licensed to land grant colleges, those which had the fortitude to continue to broadcast during the difficult decades, 1920 to 1940.

Uneven National Distribution

Because of the uneven development of educational radio facilities geographically, some areas of the country are well served, others are not. The Northeastern quadrant is generally blanketed with educational radio licensees (at least in the major metropolitan centers), as is much of the Great Lakes region and the major cities of the West and the Pacific Coast. But the Southeastern and Southwestern states, along with a number of Plains and Rocky Mountain States are covered inadequately. In short, there is a need to fill in the gaps of existing coverage.

An effort in this direction is a current exploration by the FCC of the nationwide educational Table of Assignments similar to the existing ETV pattern. In light of educational broadcasting's rapid growth, the FCC is considering the most effective ways to utilize an increasingly crowded spectrum and permit the growth of statewide and regional networks.

As the dominant licensees, with 244 stations, the colleges and universities are the most important group in educational radio. The public school systems are the licensees of over 50 in-school and instructional stations. Another 37 stations are licensed to such diverse bodies as private non-profit institutions, religious groups, independent schools and other miscellaneous institutions of education.

Educational Radio Licensees

	FM (Reserved)	FM(Non-Reserved)	AM
Colleges and Universities	220	8	16
Public School Systems	49	1	1
Independent Schools	10		
Biblical Colleges	10		1
State Councils	9	1	1
Educational Organizations	9	4	
Public Libraries	3		
Municipally-Owned	1	1	1
	311	15	20

(Source: Federal Communications Commission)

As might be expected with so many different kinds of licensees, their stations have various kinds of functions. The colleges and higher educational authorities use their stations for cultural enrichment, student training, and in a few cases, for student teaching. In addition, they tend to see their stations as having a public relations purpose. The school districts focus upon direct teaching and supplementary instruction. The non-profit institutions and public libraries are primarily concerned with adult education, particularly cultural enrichment, and the theological groups generally favor informal adult education, with a few accentuating religious education.

That there is some confusion of purpose among educational radio licensees cannot be gainsaid. Many stations, as will be explained later, are left almost entirely without supervision once a budget appropriation is made. Many have not given sufficient thought to how to perform their function most effectively and merely assume they are discharging their responsibilities by broadcasting so-called cultural material. On the other hand, a growing number of licensees believe their stations should have a broad community function. This most often means extending the resources of their academic institution into the community. It is also coming to mean providing other services of value such as news, weather, agricultural information and social problems directly affecting the community.

Hours of Broadcast

Not only does educational radio provide diverse fare, but it also provides long hours of service. Here are hours of operation, as shown by the questionnaire responses:

Weekdays:	72 stations nine to sixteen hours
	42 stations six up to nine hours
	9 stations three up to six hours
Saturdays:	59 stations nine to sixteen hours
Sundays:	51 stations nine to sixteen hours

A large number of stations, mostly in-school, do not broadcast on weekends, and many are silent either one day or the other. Educational radio generally broadcasts from 12 noon to 12 midnight. Its service is weakest in the 6 to 9 a. m. early morning hours.

Budgets

The scope and limits of educational radio today are clearly indicated by the range of operating budgets available to the medium. As Table 1 shows, almost 50% of the stations operate on budgets of less than $20, 000 a year. More than half, or 54%, have budgets under $25, 000. Approximately one-third must exist on less than $10, 000 per year. Only about one-seventh of

TABLE 1

PRESENT TOTAL OPERATING BUDGET

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	73	100%[4]	26	100%[4]	5	100%[4]	28	100%[4]	76	100%[4]	104	100%[4]
Those respondents who reported on their present total operating budget:												
$1,000 and under	1	1%	1	4%	--	--	2	7%	--	--	2	2%
$1,000-5,000	11	15%	4	14%	--	--	10	36%	5	7%	15	14%
Over $5,000-10,000	14	19%	3	12%	--	--	10	36%	7	9%	17	16%
Over $10,000-15,000	4	5%	--	--	--	--	2	7%	2	3%	4	4%
Over $15,000-20,000	7	10%	3	12%	1	20%	2	7%	9	12%	11	10%
Over $20,000-25,000	4	5%	3	12%	--	--	--	--	7	9%	7	7%
Over $25,000-30,000	2	3%	1	4%	--	--	2	7%	1	1%	3	3%

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[1] Includes state-owned facilities
[2] Includes private non-profit organizations, religious institutions, foundations
[3] Includes stations between 11-19 watts
[4] 100% represents the number of respondents in each category

TABLE 1a

PRESENT TOTAL OPERATING BUDGET (Continued)

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	73	100%[4]	26	100%[4]	5	100%[4]	28	100%[4]	76	100%[4]	104	100%[4]
Over $30,000-35,000	3	4%	2	8%	--	--	--	--	5	7%	5	5%
Over $35,000-50,000	10	14%	3	12%	--	--	--	--	13	17%	13	12%
Over $50,000-100,000	5	7%	4	14%	--	--	--	--	9	11%	9	9%
Over $100,000-150,000	5	7%	--	--	1	20%	--	--	6	8%	6	6%
Over $150,000-200,000	4	5%	1	4%	1	20%	--	--	6	8%	6	6%
Over $200,000-300,000	2	3%	1	4%	2	40%	--	--	5	7%	5	5%
Over $300,000-600,000	--	--	--	--	--	--	--	--	--	--	--	--
Over $600,000	1	1%	--	--	--	--	--	--	1	1%	1	1%

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[1] Includes state-owned facilities
[2] Includes private non-profit organizations, religious institutions, foundations
[3] Includes stations between 11-19 watts
[4] 100% represents the number of respondents in each category

Question 51: Operating budget

all the stations answering the budget question enjoyed budgets of over $100,000. A small number have budgets of over $200,000, and only one over $290,000.

It is hardly surprising to find a direct connection between budget size and the quality and extent of station programming. True, a number of small stations can demonstrate impressive records of performance, but by and large, the most widely respected stations are those in the higher budget ranks, which have the greater manpower and financial resources. This shows quite strikingly in analysis of station services.

Note that the percentage of stations with budgets of over $100,000 is highest in the category of stations which have no school ties, those in the Private/Foundation/Church group, of which there were seven in the responding group. This group also tends to have the highest percentage of professional staffing.

The budget level affects total station performance; that is, the higher-budget stations not only excel in quality and scope of performance, they also tend to be superior in all aspects of operation. One can hardly expect more than the minimum ability to stay on the air from a station which reports a total annual operating budget of $760!

Staffing

As might be expected, the educational radio medium is beset with manpower problems. These arise from the obvious budgetary limitations, the lack of salary and career incentives, and the powerful attraction to the young of television, which has overshadowed the aural medium almost two decades.

Table 2 reveals that an overwhelming percentage of the stations, over 75%, are not adequately staffed, according to the managers' reports. This is true of all categories of station surveyed. More than three out of four of the respondents definitely so stated and cited specific functions. Almost two-thirds of the stations report that their program staff members serve in other station functions. Among university/college and school district stations, over 60% report that their program people must serve in non-programming, routine, clerical functions as well. This is in contrast to the seven stations in the non-school category, which report that over 70% of their program staffs are not required to serve in other capacities. Of the 75% of the stations which indicated "inadequate staffing" on their questionnaires, the vast majority reported having to use from four to over ten part-time employees. The Salary Table 3 reveals the income limits which make it difficult to attract talented people.

Moreover, there do not appear to be many managers who function full-time in station operation. Most often, in the school-connected stations, they combine

TABLE 2

ARE THERE FUNCTIONS AT STATION (EXCLUDING ENGINEERS) NOT ADEQUATELY STAFFED?

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES: There are functions which are not adequately staffed	77	79%	20	67%	7	100%	14	47%	90	86%	104	77%
NO: Functions are adequately staffed	19	19%	7	23%	--	--	14	47%	12	11%	26	19%
NO ANSWER	2	2%	3	10%	--	--	2	6%	3	3%	5	4%

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[1] Includes state-owned facilities
[2] Includes private non-profit organizations, religious institutions, foundations
[3] Includes stations between 11-19 watts
[4] 100% represents the number of respondents in each category

Question 71: Are there functions at your station (excluding engineers) which are not adequately staffed?

TABLE 2a

DO ANY OF PROGRAM STAFF SERVE IN OTHER STATION FUNCTIONS?

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES: Program staff do serve in other station functions	62	63%	18	60%	2	29%	18	60%	64	61%	82	61%
NO: Program staff serves in no other station function	36	37%	12	40%	5	71%	12	40%	41	39%	53	39%

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1 Includes state-owned facilities
2 Includes private non-profit organizations, religious institutions, foundations
3 Includes stations between 11-19 watts
4 100% represents the number of respondents in each category

Question 70: Do any of your program staff serve in any other station function?

TABLE 3

PRESENT TOTAL SALARY BUDGETS

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	72	100%[4]	22	100%[4]	7	100%[4]	25	100%[4]	76	100%[4]	101	100%[4]
Those respondents who reported on their present total salary budgets:												
None - no salaries paid	5	7%	--	--	--	--	4	16%	1	1%	5	5%
Less than $1,000	4	6%	1	5%	--	--	5	20%	--	--	5	5%
Over $1,000-2,500	9	13%	1	5%	--	--	4	16%	6	8%	10	10%
Over $2,500-5,000	4	6%	--	--	--	--	2	8%	2	3%	4	4%
Over $5,000-10,000	9	13%	3	14%	1	14%	8	32%	5	7%	13	13%
Over $10,000-20,000	11	15%	6	27%	--	--	2	8%	15	20%	17	16%
Over $20,000-35,000	10	14%	5	23%	--	--	--	--	15	20%	15	15%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

TABLE 3a

PRESENT TOTAL SALARY BUDGETS (Continued)

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	72	100%[4]	22	100%[4]	7	100%[4]	25	100%[4]	76	100%[4]	101	100%[4]
Over $35,000-50,000	6	8%	2	8%	1	14%	--	--	9	12%	9	9%
Over $50,000-75,000	3	4%	2	8%	1	14%	--	--	6	7%	6	6%
Over $75,000-100,000	1	1%	--	--	--	--	--	--	1	1%	1	1%
Over $100,000-150,000	7	10%	--	--	4	58%	--	--	11	14%	11	11%
Over $150,000-200,000	1	1%	1	5%	--	--	--	--	2	3%	2	2%
Over $200,000	2	2%	1	5%	--	--	--	--	3	4%	3	3%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 51: Budget

station management with other functions, such as teaching, departmental administration, TV management, and so forth.

Disinterested School Administrations

Management, staffing and budget limitations are in the final analysis directly related to school administration attitudes toward the medium. With few exceptions, institutions of higher education do not accord radio the same degree of concern they do other interests, and thus fail to develop it fully as an educational resource. This is shown in Table 4 which definitely indicates that most (100) of the legal licensees of the 135 educational radio stations surveyed participate minimally in the operation of the stations. Over two-thirds of the licensees of the stations studied were reported to be active in supervision just once a month or less. In the seven Foundation/Private/Church category, on the other hand, the legal licensee is reported as maintaining a daily supervision of the station's operations.

In matters of programming, less than one-third show a "Great Deal" of participation in policy decisions. Close to one-half of the stations surveyed indicated that the licensee participates "Very Little." About 40% of the stations surveyed reported "Very Little" participation on equipment and policy decisions, with the School District group showing the highest score for any category, approximately two-thirds taking a"Great Deal" of interest. It is only on budget policy decisions that the degree of licensee participation becomes significant. Over two-thirds of the respondents reported a "Great Deal" of participation. This held true for all categories of station.

Lack of Facilities

The physical needs of the stations are revealed by the finds recorded in Table 5: One-half of the stations surveyed reported they did not have adequate news room facilities; over one-fourth reported having no news room at all. In other words, the great majority, 68%, either do not have adequate news facilities or a news room. In the school district category, the percentage rises to close to 100%. Similarly, approximately one-half of the respondents reported they are not equipped with the basic musical instruments needed by a station, such as a grand piano or an electric organ.

Weak Promotion

Educational radio station promotion tends to be severely limited or non-existent so that audiences which might find values in specific programs, often do not even know when they are being broadcast. The standard publicity vehicle is the program guide. Since these guides are usually mailed to listeners upon request, and often a small nominal charge is paid, greater than average interst is presumably involved. Yet these program guides

TABLE 4

DEGREE THAT LICENSEE IS ACTIVE IN OPERATION OF THE STATION

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
DAILY	20	20%	9	30%	5	71%	9	30%	25	24%	34	25%
WEEKLY	3	3%	2	7%	--	--	1	3%	4	4%	5	4%
MONTHLY OR LESS	73	75%	19	63%	2	29%	20	67%	74	70%	94	70%
DON'T KNOW	2	2%	--	--	--	--	--	--	2	2%	2	1%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 3: How active is the licensee in the operation of your station?

TABLE 5

ADEQUACY OF NEWSROOM FACILITIES

	College/ University[1] No.	College/ University[1] %	Public School/ Library No.	Public School/ Library %	Other Licensees[2] No.	Other Licensees[2] %	10 Watts[3] No.	10 Watts[3] %	All Others No.	All Others %	TOTAL No.	TOTAL %
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES: Has adequate facilities	39	40%	1	3%	2	29%	9	30%	33	31%	42	31%
NO: Does not have adequate facilities	42	43%	9	30%	5	71%	14	47%	42	40%	56	42%
NO NEWSROOM	16	16%	19	64%	--	--	5	17%	30	29%	35	26%
NO ANSWER	1	1%	1	3%	--	--	2	6%	--	--	2	1%

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[1] Includes state-owned facilities
[2] Includes private non-profit organizations, religious institutions, foundations
[3] Includes stations between 11-19 watts
[4] 100% represents the number of respondents in each category

Question 77: Has your newsroom adequate facilities -- space, desks, typewriters, file capacity, etc.?

range from the few which are beautifully printed and put together, to the many which are simple mimeographed sheets. Even then, except for the larger stations which usually charge for guides, many of the other actually prefer that they do not receive too many requests because of their limited funds. In some areas, partial program listings are carried by newspapers which may also give important editorial space to specific program features and station projects. The cost of mass media advertising makes it obviously prohibitive for educational stations. Unfortunately, the full-time promotion person does not exist in educational radio; with very few exceptions, stations relegate the function to the part-time attention of an inexperienced student. At a time when the mass media barrages the public with sight, sound and print to get his attention, educational radio must rely on the listener's own genuine interest in its services. It is an understatement to say the medium has some distance to go before it even begins to reach its potential audience with its story.

Virtual Absence of Research

Both the questionnaire and field interviews reveal a profound weakness in the medium's knowledge of its audiences Table 6 shows that over 50% of the stations conduct no audience research of any kind, and only about one-third try to determine the size of the audience. Half the stations conduct no studies of audience composition, or program effectiveness. If it is kept in mind that the School District stations dominate the group of educational stations that do research, and their listeners are captive, the conclusion is inescapable that the majority of stations have little awareness of the nature of their audience, the effectiveness of their programs or the number of their listeners.

There appear to be two reasons for the lack of research. The first is a simple lack of conviction that audience research is either necessary or important, given the cultural orientation of many stations. The second is budget. Research is expensive and stations are ill-equipped to conduct even minimal studies. For example, 42% of the respondents asked to provide an estimate of the number of homes in their areas were unable to do so.

Nevertheless, some data is available, though limited; however, considering the rather inconclusive nature of even FM research in the commercial field, interpretations must at the present period be regarded as speculative. There is no definitive research today which gives the size of the national audience of either educational or commercial FM broadcasting. The best that can be said is that in virtually every market in the leading 200 cities, as measured by the commercial rating services, FM penetration reaches at least a level of 40%, and it may rise, occasionally, as high as 70%.

TABLE 6

DOES LICENSEE CONDUCT RESEARCH ON SIZE OF AUDIENCE?

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES	32	33%	17	57%	1	14%	13	43%	37	35%	50	37%
NO	51	52%	11	37%	6	86%	11	37%	57	54%	68	51%
NO ANSWER	13	13%	2	6%	--	--	5	17%	10	10%	15	11%
NOT NOW:PLANNING TO DO SO	2	2%	--	--	--	--	1	3%	1	1%	2	1%

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[1] Includes state-owned facilities
[2] Includes private non-profit organizations, religious institutions, foundations
[3] Includes stations between 11-19 watts
[4] 100% represents the number of respondents in each category

Question 36: Do you conduct studies on size of audience?

From the estimates submitted by the respondents, Trend Finders Inc., which did the statistical analysis of the questionnaire results for Land Associates, projects a national audience available to educational FM stations of approximately 70,000,000 people.

19 Station Studies

Nineteen stations submitted research studies with their questionnaires. They vary so in technique and aim that they do not allow of ready comparisons. Nevertheless, there is enough agreement among them to permit some tentative observations about the nature and listening behavior of the educational FM audience:

1. Listening is greatest in the evening hours, rising from seven to nine, and "peaking" at ten p.m. This reverses the pattern of commercial radio, whose "prime time" is the morning period, followed in importance by "daytime."

2. The audiences are generally above average in education and income, and tend to be older than the average audiences listening to the popular music-and-news stations.

3. Although the interest in other programming keeps growing, music remains the preferred material: classical, semi-classical and lighter music, in that order. News, in particular, appears to be one of other program types considered essential by more and more listeners.

It may be no accident that those stations which have made serious efforts to learn something of their audience have often found they enjoy a greater popularity then they may have imagined. In one instance, uncovered by this study, the educational station emerged as the audience leader during a substantial portion of the day against its commercial competition--KWSC, the Washington State University station in Pullman.

Not having access to costly rating surveys, educational stations are forced to rely on the traditional sources of mail, telephone and personal contact with the listener for evidences that they are reaching audiences. An analysis of the questionnaire results demonstrates beyond question that educational radio is reaching a substantial audience with considerable effectiveness. WHA Wisconsin, for example, reports an annual receipt of 7,000 pieces of mail; WRVR New York City, 25,000. Twenty percent of the stations report they receive over 2500 pieces of mail per year.

Educational Radio Programming

In the face of the severest kind of financial stress, America's educational radio stations manage nevertheless to provide a remarkable range of program services.

Public Affairs

Public affairs services by educational radio -- designed to treat a wide range of public issues in depth and with authority -- have grown greatly during the last several years. A principal reason for this expansion is the ease with which tape recordings can now be made of seminars, conferences and other educational forums taking place with increasing frequency on college and university campuses. Such gatherings, often not designed for radio in their initial planning, often turn out to be exciting fare, and some stations broadcast several such forums each week. The University of Minnesota's KUOM presented 250 public affairs programs in a single year, while KSAC Manhattan, Kansas, spent an entire year broadcasting a thorough treatment of the poverty program.

There seems to be increasing emphasis in the programming of such stations on a variety of domestic problems, such as poverty, minority groups, urban affairs and changing morality. Government issues, educational controversies and international affairs also receive considerable attention. Educational stations attempt to deal with social problems ranging from narcotics and neurosis to criminal law and teen-age marriage. In dealing with minority group difficulties, efforts are made to explore the problems of oft-neglected groups, such as the American Indian and the urban ethnic minorities.

In the international realm, educational radio stations have treated the United Nations and the draft, Southeast Asia and Mainland China, international trade and the world population problem. Outstanding educators and public servants are often able to extend their views on crucial issues to wide new audiences through this medium.

On the operational side, it should be noted that a large number of distinguished outside organizations of various kinds are regular suppliers of programming to educational radio stations.

Community Affairs

Providing cultural enrichment to the community has long been a key objective of educational radio, but, more recently, a new dynamism has emerged -- a striving to become more thoroughly involved as a local force, focusing on daily concerns and providing local information and serving as a lively platform for the airing of local issues. Often, the educational station provides the citizen with a vital link to his government on several levels; many such stations serve as the only broadcast outlet for such public bodies as State legislatures, City Councils and Boards of Education -- as well as for reports from Senators and Congressmen to their constituents.

Much more remains to be done by educational radio in the field of community affairs. The minimum budgets under which some stations operate often force them to concentrate on college-oriented programs, since they cannot afford to be on the air for enough hours each day to provide the kind of community service they would like to provide. By the same token, the stations are not usually in a financial position to provide minority groups the kinds of assistance they would require to use educational radio as a voice to help them in their aspirations. The use of educational radio, on the other hand, by a great variety of local, regional and national organizations is limited only by their ability to produce suitable material for broadcasting. However, the medium's potential as a true channel of community communication has yet to be fully realized.

Special Audiences

The special needs of the aged, the blind, the infirm, veterans, the socially disadvantaged, parents of handicapped children and other such groups are beginning to be of concern to educational radio. The medium is beginning to fill a gap in the mass media, by providing in some instances the only existing communications service in this field. A dramatic example is found at the Louisville Free Public Library stations, WFPK and WFPL, which provide, from their extensive tape library, recordings for the Kentucy School for the Blind. A blind professor at the school received a masters degree in Literature with the help of the WFPK-WFPL recordings. Many educational broadcasters feel that an ultimate breakthrough in this area could occur through the wide-scale use of sub-channel multiplexing.

News

The unique role of educational radio in broadcasting the news lies in providing the depth treatment, analysis and interpretation, which simply do not fit into the conventional capsulized treatments of the news generally available on commercial stations. This includes feature treatment of such special areas as religion, health, the arts and business -- traditionally thought of as more the province of the printed media. News for non-English speaking listeners and news for children are other notable areas of service. In Atlanta, Ralph McGill, editor of the Atlanta Constitution, presents a children's news program. In 1965, educational radio achieved something of a landmark with the first live international connection of educational stations for broadcast of the West German National Elections. Seventy stations participated in the broadcast.

General Education

A constant stream of information and new knowledge for adults in a great variety of areas -- from politics and economics to scientific developments and Classical history is conventional fare for educational radio. Formats vary, and include lectures, speeches, roundtables, interviews and documentaries. Special programs are planned for children and women and for those with a particular educational interest, even including the acquisition of a new language. The programs include credit courses for students in many fields. A number of stations also produce supplementary written materials in such cases, such as manuals and study guides.

In-School

In-school broadcasts for elementary and secondary school students are, by definition, a service unique to educational radio. It is estimated that this service reaches five to ten million children. In the state of Wisconsin alone, the State Educational Network reached an estimated 770,000 school children in 1965.

Stations do not reach the audiences which they should and could, in some cases, because budgetary limitations have kept many of the schools from installing adequate communications systems to receive in-school broadcasts. When the technology exists, teachers are often not properly instructed in how to use the educational serivce.

In-school radio is largely an enrichment service. It is relatively inexpensive to produce, and often more easily absorbed than other media by small children. It should be remembered, in this connection, that while television is often an excellent -- even indispensible -- instructional resource, the extra costs and technical problems involved in many cases are not justified when the same job can be done with radio -- often with the added benefits of heightened awareness and imagination. Music and literature are obvious examples.

In New York City, when instructional television was introduced, there was a decrease in the number of classes using in-school radio. Now, five years later, radio has surged back. Some 22,000 classes--more than the number using instructional television--currently listen to in-school radio.

"Music, news, and drama are better done on radio than television," observes Mrs. Cecil Suffern, Assistant Director of Broadcasting for the New York City Board of Education, and head of programming for both WNYE and WNYE-TV. "Not only do we have to consider the additional cost of television, but TV does not add a great deal to the instruction we are trying to give."

Often, both media can be used to supplement one another. Teacher training and enrichment is another area in which many stations provide a needed service.

In-school broadcasting has great potential, but the national picture is mixed -- ranging from very creative use to neglect. The support which is needed here is not only financial; but mobilizing of other resources to bring about the more complete integration of the medium into the local educational system is necessary.

Agriculture

The United States Department of Agriculture reports that of 800,000 broadcasts of its material in 1965, about one-half were carried by educational stations. Many such stations serve primarily rural areas, and some which are owned by the land-grant colleges and universities provide the most outstanding service in this field.

Educational radio provides farmers with agricultural news, reports from their representatives in Washington, marketing information, crop improvement advice, and short courses to keep them abreast of developments in the agricultural sciences. A survey of program offerings in this field clearly indicates that educational radio provides the nation's farmers with much material which would simply not otherwise be available to them.

Cultural Enrichment

Although, as other sections of this report clearly show, educational stations are far more than "classical juke boxes," they often do provide the only source of fine music broadcasts in their listening areas. Often, they also are the only outlet for serious contemporary music, and other forms such as the full range of the opera repertoire, chamber music, and uniquely American compositions. It should be emphasized, however, that the strength of educational radio in the cultural field does not rest solely on its musical programming, but rather on its ability to blend other forms of the fine arts.

Radio drama, for example, is thought by many to be a lost art, but many educational radio listeners would disagree. Drama production is being done regularly for radio by individual local stations, which lean heavily upon the acting and writing resources available to them on their campuses and also provide an outlet for such shows as the "BBC World Theatre." Poetry, children's literature, readings by artists of their own works, philosophy and even satire, are a part of educational radio fare. This is genuine culture -- and reachable culture, for children in urban ghettos, serious students, Indians on reservations, invalids and isolate farmers.

The National Educational Radio Network (NERN)

The National Educational Radio Network is neither an interconnected network nor one which does any centralized production of network programs. Instead, NERN is a national organization of educational radio stations served through the distribution of tape recorded programs by network headquarters in Urbana, Illinois. Programs are duplicated there on high-speed equipment and distributed through the mails to more than 150 NERN affiliates. It has been a self-supporting operation (through the payment of fees by affiliates) for the last 11 of its 16 years. In 1967, it is estimated that the Network will distribute some 35,400 hours of educational radio programming throughout the United States -- on a budget of less than $60,000.

NERN programs fall into the following categories: current information, physical sciences, arts and literature, social sciences, mental and physical health, music, and children's programs. In-school offerings are also provided. By and large, such programs are produced by individual network affiliates, but many come from other sources.

Educational radio dreams of a live, interconnected network, a national production center, and a greatly expanded centralized news and public affairs service. In March, 1967 the Network took a first modest step in this direction through the establishment of the NER Public Affairs Bureau in Washington. The present view in the field is that a satisfactory network service could be sustained at an expenditure of only one-tenth of what would be required for television.

Other networks serving educational stations include the Broadcasting Foundation of America, which distributes programming services from abroad to American stations; the Eastern Educational Radio Network -- eight Eastern stations which exchange taped programs, cooperate in the production of shows and interconnect live for some broadcasting (which has not proven feasible on a regular basis); and the Intercollegiate Broadcasting System, which serves mainly carrier-current (closed circuit) campus operations with about four and 3/4 hours of material per week.

Non-Broadcast Services

A present area of neglected opportunity for education radio is the utilization of its resources for the furnishing of non-broadcast materials. As might be guessed, these services have lagged because of personnel and financial limitations. Some work in this field has been attempted. Stations are reaching out to provide such services for physicians, nurses, audio tutorial laboratories, and educational institutions in developing areas.

Tapes of educational radio programs have a wide variety of applications in such areas as community organizations, which might use them as resources to stimulate discussion. Even without adequate promotional

TABLE 7

OUTSIDE SOURCES OF PROGRAMMING

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	85	100%[4]	28	100%[4]	5	100%[4]	26	100%[4]	92	100%[4]	118	100%[4]
Those respondents who reported on their outside sources of programming:												
National Educational Radio	65	76%	24	86%	1	20%	17	65%	73	79%	90	76%
BFA	37	44%	2	7%	5	100%	5	19%	40	44%	45	38%
CBC	47	55%	11	39%	1	20%	7	27%	52	57%	59	50%
BBC	41	48%	4	14%	4	80%	5	19%	44	49%	49	41%
Commercial Networks and Stations	13	15%	4	14%	1	20%	3	12%	15	16%	18	15%
All Others	62	73%	17	61%	2	40%	14	54%	67	73%	81	69%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 66: Roughly how many hours of programming did you schedule in that same year from outside sources?

TABLE 7a

OUTSIDE SOURCES OF PROGRAMMING (Continued)

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	85	100%[4]	28	100%[4]	5	100%[4]	26	100%[4]	92	100%[4]	118	100%[4]
Total number of hours of programming supplied by National Educational Radio to stations using outside sources:											23, 689 hours	
Total number of hours of programming supplied by all other outside sources combined:											17, 122 hours	

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 66: Roughly how many hours of programming did you schedule in that same year from outside sources?

activities, the NER Network and individual educational stations do receive a number of such requests for taped copies of many programs.

Professional Communications

Educational radio was born in professional communications--the transmission of vital, up-to-the-minute, information for specialized audiences, limited in size, but unlimited in their "need to know." The first regular educational radio service before 1920, was the broadcast of crop and weather information for the benefit of that limited number of farmers who owned crystal sets. Specialized service to small groups with important informational needs is a continuing, and growing, contribution made by educational radio.

The continuing education of doctors, a problem of increasing social importance in an era in which medical knowledge and medical needs are expanding at an exponential rate, provides one of the most dramatic illustrations of the use of radio in professional communications. The Albany Medical College of Union University has been conducting two-way radio communications for postgraduate medical education since 1955. Other medical schools, and other educational stations in the Northeast followed; and similar projects, inspired by Albany's success have been operating in North Carolina, in Ohio, in Utah, and in California.

In Ohio, additional programs are underway to serve the needs of specialists in veterinary medicine, and to provide the state's elementary and secondary school teachers and administrators with the most recent available information in the field of education.

The ripples which have spread from Albany Medical College's successful regional use of two-way professional communications have crossed, not only state lines and academic boundaries, but oceans, as well. In 1965, a medical conference which originated at the WAMC-FM studios in Albany was transmitted by land-lines and trans-Pacific cable to allow two-way participation by doctors in Sydney, Australia. Having reached half-way around the world with professional communications, educational radio has only served to dramatize what yet remains to be accomplished.

Service to Commercial Stations

Educational radio's audience and its impact cannot be measured by merely adding the audiences of all educational radio stations. One reason is to be found in the little known story of close cooperation between educational and commercial broadcasters.

Table 8 indicates that 59% of the educational stations supply programming to the commercial radio stations.

TABLE 8

DOES LICENSEE SUPPLY PROGRAMMING MATERIAL TO COMMERCIAL STATIONS?

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES: We supply programming to commercial stations	61	63%	13	43%	5	71%	16	53%	63	60%	79	59%
NO: We do not supply programming to commercial stations	20	20%	11	37%	--	--	8	27%	23	22%	31	23%
No Answer: Did not report if they did or did not	17	17%	6	20%	2	29%	6	20%	19	18%	25	18%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 64: Does licensee supply programming material to commercial stations?

The range and influence of educational radio has been extended in some cases to a degree never before documented. Examples: WUOM programming from the University of Michigan is used by 111 of the state's 118 commercial stations ... KSAC's K-State Network, the stations's tape distribution service, reaches 95% of all Kansas homes via commercial stations. Some educational stations produce public service programming "on order" to meet the specific requirements of one or more commercial broadcasters.

New Frontiers for Educational Radio

School stations are hoping to expand their services beyond the limits of the conventional classroom and the common curriculum. WBOE Cleveland, for example, would use radio to bring young people the professional insights of physicians and psychiatrists into problems of alchoholism and drug addiction, to tape the knowledge of local executives in helping school-age citizens make realistic vocational plans, to go behind the scenes at the famous Cleveland Playhouse for the Spring Shakespeare Festival. WIAN Indianapolis, would create a "Want Ad Job Center of the Air;" WFBE, Flint, Michigan, would add courses for adults to its present schedule of in-school broadcasts.

"Forgotten Audiences"

To the demonstrated success of educational radio as a means of professional communication, would be added specialized programming for and about the forgotten audiences in our affluent society: KUOW, Seattle, will soon begin programming from the University of Washington's Mental Retardation Center, and will serve the elderly with programs from the Medical School's Division of Geriatrics. KSAC, Manhattan, Kansas is hoping to begin a series on the rehabilitation of the young criminal. "Enrichment Through Radio" is the name, and goal, of a Elementary and Secondary Education Act project at WAMU, Washington, designed to teach the culturally and economically under-advantaged. The Palm Beach County School System would give the Spanish-speaking, migrant worker families of southern Florida their own radio station. School programs, conversational English and Spanish, information on baby care, work availability, local and world news, and notices of rummage sales, would all be included in the schedule.

In St. Louis, a local commercial station, KATZ, has taken the leadership in the formation of the St. Louis Educational Assistance Fund which is an applicant for an educational FM frequency. The new station would hope to "touch the inner springs of understanding of the Negro pupil," following him from classroom to home, standing at his shoulder, and providing help he might not otherwise get. A "Homework Clinic" could provide for those who might otherwise become drop-outs the same sort of immediate and vital help which doctors now get via WAMC's two-way radio seminars.

Multiplexing

As the identification of multiple audiences grows, and their need for additional channels of communication become more vital, services must be expanded geographically to areas not now reached, and new services provided in increasing number to the many audiences within range of each existing station. In some cities, the broadcast spectrum is already crowded to capacity, and nowhere are there more than twenty-four hours in the day. Solution to the enigma is to be found in multiplexing, a technical minor miracle which permits one or more additional signals to ride "piggy-back" on the main channel transmission of an FM station. The potential of turning a single station into a transmitter of two, three, or more simultaneous service offers a multitude of opportunities.

No list could encompass all of the possible uses for special service envisioned by educational radio broadcasters. Among those mentioned by station managers are: services to the parents of retarded children; to operators of cattle feed lots; for the continuing education of lawyers; to provide language drill materials; to reach prison inmates and hospital patients; to provide teletype and facsimile transmission of graphic materials to farmers; to provide a complete graduate curriculum leading to the masters degree in engineering. WAMC, pioneer in the continuing education of doctors via radio, would use multiplex transmission to extend such services to no fewer than forty-three allied health fields.

But multiplexing provides no easy answers to the problems of today and tomorrow. Programs transmitted on sub-channels cannot be received on conventional sets. Special receivers cost ten times as much as the lowest cost AM-FM receiver; educational broadcasters can hardly be expected to absorb the costs of receiving, as well as transmitting, equipment.

Educational Communications Systems

Multiplexing offers, not only the possiblity of additional aural channels, but a means of moving many other forms of electronic information. Subchannels can transmit data to computers, teletype print-out, hard copy reproduction of charts, graphs, and schematic diagrams, and even slow-scan television. The yet-to-be-recognized fact is that radio is no longer limited to the transitory and the invisible. The educational radio broadcaster is more and more coming to recognize that he is a communicator, and an important participant in the emerging world of "educational systems" -- a world in which the lines between television and radio, programmed instruction and computers, technology and textbooks, are becoming blurred, and the task, rather than the technique, dictates in what combinations the growing number of available resources shall be employed.

State-Wide Networks

Plans for state-wide educational radio networks are moving ahead. In Florida, radio stations at 26 junior colleges would provide live interconnection and state-wide coverage. In Kansas, the four existing educational radio stations would be supplemented by three more strategically located transmitters to bring educational radio to all Kansans. An allocations study is underway in Kentucky to determine the paramaters for the establishment of a state network.

Colorado, Iowa, Michigan, Minnesota, New York, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Washington, and Missouri are other states in which plans for full-coverage radio networks are in various stages of development.

To some degree, educational radio must credit the existence of ETV for the progress being made toward the realization of a 40-year old dream. More accurately, the credit is due to the emerging concept of educational telecommunications systems. In New York, and elsewhere, the development of plans for a state ETV network have provided new opportunities for radio. A network for any single medium can be the substructure upon which multi-media capacity can be constructed for maximal service and flexibility and at minimal cost.

General Observations and Recommendations

Before educational radio can be properly developed as a national resource, there must be clear recognition of the primitive level on which so many parts of the field must operate. When the most important immediate need is an office typewriter -- an actual case -- talk of new horizons of radio service must appear visionary at best. In sum, the starting point of any national building plan must be the stark truth: educational radio, for the most part, is underfinanced, understaffed, underequipped, underpromoted and underresearched. That its program service is nevertheless exemplary, should not be allowed to obscure its true predicament.

1. The need for financing is self-evident, so much so, indeed, that to dwell on it at length would mean merely to elaborate the obvious. If this study has made anything clear, it is that basic financing is the key need; financing for facilities, equipment, personnel, training, programming and production. Financial assistance is also needed for in-school radio. These stations, now

on part-time, could provide service at nights, on week-ends and during the summer months; they could become, in the fullest sense of the phrase, true community stations.

2. There is a profound lack of knowledge in educational radio about itself which only research can fill. Major research studies are necessary to develop information on audience composition and size, and community and special audience needs. The total job that needs to be done in educational broadcasting is so huge that more broad research is needed to develop detailed proposals to cope with the great inadequacies in budget, personnel, facilities and equipment revealed in the present study. At least a beginning is needed to develop audience research, prior to programming, so that it can be integrated into these services, and to do effective research after the program is heard to supply the necessary feedback information so essential to the proper functioning of a dynamic communications medium.

3. There is a need for increased understanding on the part of educators of the resources at their command, of the value of educational radio as part of an integrated system of educational technology; too often the failure of educational radio is in reality only the failure of educational authorities to utilize the medium effectively. As a beginning, they must learn to distinguish those subjects best taught on television, as well as those taught as well or more easily and economically. The cost per pupil is at least two-and-a-half times as high on television as on radio.

4. If the full potential of multiplexing is ever to be realized, a massive attack upon the high cost of receiving equipment must be successfully waged. A partnership between government, industry and education is indicated which looks to large-scale social projects requiring a large volume of receiver production in order to stimulate design and manufacture of low-cost receivers. A pilot project, conducted under the aegis of the Department of Health, Education and Welfare, might well be undertaken to test the value of multiplexing in an urban environment.

5. The Federal Communications Commission's current efforts to develop a Table of Allocations for Educational FM should be pushed to a successful conclusion. Such a Table is essential to the assurance of adequate national coverage and the development of state-wide networks.

6. Educational radio's ambitions toward national and international coverage should be encouraged and supported. Given commercial radio's unmistakable, and perhaps irreversible, local trend, there is a decided national stake in building educational radio as a major instrument of national and international communications. The NER Public Affairs Bureau and the NER Network

could well serve as the starting point. Radio, moreover, should be included in all plans for satellite communication. Because of the relatively low cost of such radio operation, the early stages could be financed through modest foundation grants until some form of permanent financing emerges through the national discussion on the future pattern of educational broadcasting now under way.

EDUCATIONAL RADIO PROGRAMMING

This section describes the many ways by which the medium serves its varied publics. It covers:

- **Public Affairs**
- **Community Affairs**
- **Service to Special Audiences**
- **News**
- **General Education**
- **In-School Instruction**
- **Agriculture**
- **Cultural Enrichment**

PUBLIC AFFAIRS

Educational radio's public affairs services have three distinct characteristics: (1) They cover the widest range of domestic and international issues; (2) They usually furnish the subjects they treat all the dimension and depth needed; (3) They feature a notable list of authorities and experts to disseminate information.

In the past several years the volume of such programming has increased. The increase is not entirely due to the production of more public affairs material in broadcasting studios. Rather, it has come because of the use of tape to record gatherings of experts in the growing number of colloquiums, seminars and conferences which now take place on college campuses. In addition, where some stations -- those at very small colleges, with low budgets -- have not been able to do this, public affairs-minded groups have often recorded similar material and made it available for broadcast.

As a natural part of the educational process, a university in the course of a year will present a great many forums, discussions, and debates. Many of these find their way on to educational radio virtually unchanged. A minimum of one such forum is heard on virtually every educational station every two weeks, and many carry several each week. During a single year, for example, KUOM Minneapolis presented some 250 such public affairs programs.

Some might argue that, if anything, the educational station may sometimes treat public-affairs topics too intensively rather than too superficially. One subject can be discussed over a period of eight or ten hours. The usual amount of broadcast time given over to a topic is one hour. Formats vary: debates, lectures, forums, reports, panels, roundtables, discussions, speeches, documentaries, even dramas. Because of financial limitations, documentaries and dramas are rare, but the large university stations usually present a number of them during the year.

Considering public affairs, it must be remembered, also means considering general education. It is very difficult to split these two categories cleanly. Depending on the listener's knowledge, they generally shade over into each other.

Problems in Focus

In educational radio, the newest focus is upon such domestic problems as poverty, minorities, pollution, urban affairs, youth and student unrest, the new morality, and various social ills and issues. Much time is also devoted to government (state and federal) issues related to new interpretations of laws, to new laws themselves, and to unsettled educational questions. Foreign affairs and international issues -- Vietnam, China, Russia, Communism, peace and war, nuclear armament and disarmament -- also provide the grist for many public affairs programs.

A year-long series about poverty on KSAC Manhattan, Kansas during 1966 is but one illustration of the potential of educational radio as a means of alerting the public to a little-known problem. The series began with a report which made clear that Kansas had a poverty crisis different only in dimension from those of the large Eastern states. In a series of interviews, the station gave vital facts about the poor in Kansas -- patterns of living, size of families, lack of male leadership within the family unit, and housing. Professionals from the Riley County Medical Society also discussed the high incidence of serious psychosis among the poor. At a meeting of the Kansas Workshop on Low Income Families, interviews were taped with such officials as Marvin Larson, state welfare director, and Robert Harder, director of the Topeka Office of Economic Opportunity. They detailed the special problems of the welfare poor, the provisions of the war-on-poverty programs, and Medicare. These interviews made up the bulk of a documentary sent to 20 Kansas commercial stations for further broadcasting.

Minority Groups Emphasized

KSAC also presented special features on Operation Headstart, explaining its programs of teacher-training, operation of nursery schools, participation of parents, the work of community volunteers, and a review of progress at the close of summer. Time was also devoted to the Neighborhood Youth Corps and its work-study program, the Kansas Technical Assistance Program and its potential for local communities, and VISTA. The poor were also instructed as to vocational education available to them.

Not only was much attention given to the Negroes and the Mexicans, but the special plight of the older members of the Kansas population was highlighted. Their low income, housing, isolation, apathy towards food and dress were explained by specialists in family and child development, family economists, nutritionists, and other staff members at Kansas State University. "Meals on Wheels," to feed the elderly, was discussed as an idea for the State.

Students who worked in conjunction with Quaker groups in Kansas City were interviewed to talk about their experiences in aiding poverty-stricken members of specific ethnic groups, and their recreational and social work with them. The many programs also tried to introduce the culture of the low-income citizen to the middle and upper-class audiences who listen to the station.

Plethora of Programs

Many other educational stations have, of course, done programs about the poor. Ben Seligman, the director of Labor Relations at the University of Massachusetts, lectured on "Poverty Is a Public Issue," and did several other programs on the subject on WFCR Amherst, Massachusetts. WILL Urbana, Illinois presented two programs on Operation Headstart and the poverty program in general, as well as one on equal opportunities. KCUR Kansas City, broadcast the proceedings of a Conference on Equal Housing. The "Grits and Gripes" sessions of the San Francisco Opportunity Council furnished material for a 60-minute broadcast by the Pacifica stations called "The Voices of Poverty."

There is a special relationship between the problems of the poor, their status as minorities and their lives in urban surroundings. Educational radio has taken note of this with many programs about urban affairs and minorities. WBFO Buffalo featured a discussion of mental health issues in large city complexes, as well as one about civil rights and the metropolis. WAMU Washington broadcast the proceedings of a Conference on Our People and Their Cities which focused on housing, work environment, transportation and leisure. Among the speakers were Vice President Hubert Humphrey, Mayor John V. Lindsay of New York City, John Kenneth Galbraith and Philip H. Hoff, governor of Vermont. Another recent idea to improve the lot of the indigent was covered by WSIU Carbondale, Illinois, when it took up the question of minimum income.

But minorities have also been covered from another special vantage point by educational radio. WRVR New York graphically painted a portrait of racial conflict in "Birmingham: A Testament of Non-Violence," an award-winning documentary entitled "We Shall Overcome," The Red, White and Blue . . . and the Black and the White," and several other programs. From the University Convocation at Buffalo, WBFO created a program that received wide circulation on many educational radio stations: "Discriminating About Discrimination" featured James Farmer, then the head of CORE. The same station presented a series of panel discussions titled "To Be A Negro," which considered not only problems created by the prejudice of the Whites but those peculiar to the Negro community itself. A new force on the American scene, "Black Power," has been the subject of many programs by educational stations. And WAMU Washington, D. C., broadcast what was a major event for Negroes, the proceedings of "The White House Conference to Fulfill These Rights." A different approach was taken to the same general subject by WUOM Ann Arbor in its "New Sounds From The South," a series of interviews with Negroes and Whites.

The Many Minorities

But Negroes were not the only minorities given attention by educational broadcasting. WRVR New York took a non-sensational look at "The Homosexual, A New Minority" in a series of ten programs. The Pacifica stations interviewed officials of their organization, the Mattachine Society. WDET Detroit did a series about six important ethnic groups in its city: Poles, Germans, Italians, Hungarians, Croatians and Armenians. KUAC, Fairbanks, Alaska, broadcast discussions of native problems and of land claims. WBFO Buffalo, in "Nation Within A Nation" delved into the Iroquois past, explained the Indians' religion and their view of White society.

Probably one of the most ambitious attempts to deal with this neglected minority, the Indian, was in a 13-week series produced by KUSD Vermillion, S.D. This series, "Ruffled Feathers," considered in great detail the problems created by the reservation system for the Dakota Sioux, a system which isolates them from the society around them. Included are taped conversations with Indians themselves, some of whom are so old they speak only Sioux. The program was produced in cooperation with the Institute for Indian Studies at the University of South Dakota, which owns the station. The production cost $3,500, a large sum for an educational radio station to spend, and the program could not have been made without a special grant.

Educational radio has also addressed itself to another major area of concern, the growing number of social diseases facing our society: alcoholism, neurosis, crime, venereal diseases and drugs. Both KSAC Manhattan and WOSU Columbus, O., produced programs about venereal diseases. WGUC Cincinnati went into the ills created by alcoholism, into smoking and health, into marital crackups and anxiety, and aired a show about "Crime In The Streets," with a former chief of police of the city as one of the panelists. From the Ford Hall Forum, WGBH Boston, presented "Are We Pampering Our Criminals?," a debate between the former chief of police of New York City, Vincent Broderick, and the Dean of the Yale Law School, Louis H. Pollack.

Drugs, Youth, Morals

One of the rapidly proliferating social problems of our time, drugs, has been given a great deal of air time. KUOW Seattle discussed the moral issues involved in drugs, their effect on the personality, and public attitudes toward their use. WGUC Cincinnati held a roundtable on drug abuse.

The young, their growing rebelliousness and problems, and the consequences for parents were also analyzed in great detail. KSAC Manhattan aired the question of school authority to limit its students, then conducted a three-part discussion on student revolts in 1966. This subject was treated by many other stations as well. WSUI Iowa City, pondered Youth's Quest For Freedom;" WMUK Kalamazoo presented Dr. Mary Calderone in a three part series, "Developing Healthy Sexuality;" from the University of California Medical Center, the Pacifica stations broadcast the proceedings of a notable symposium, "The Uncertain Quest: Teen Age Marriage and Divorce" (it consisted of two six-hour broadcasts); the problems of drop-outs were covered by WILL Urbana. WKAR East Lansing, went into the murky world of juvenile delinquency with "Wednesday's Child," a special.

On WGBH Boston, a documentary, "The World Across the Street," contrasted two groups of boys, one White, the other Negro, living on opposite sides of the street in a low-income housing project. A vivid picture of the differences between the groups came through, with particular reference to the way they see themselves and their futures. This same subject was given still further exposure in a special five-part documentary produced by Studs Terkel for WFMT Chicago, a commercial FM station. When made available to educational radio, it was widely circulated. "Joy Street," as the series is called, is made up of interviews with teen-agers, mostly Negroes, on Chicago's South Side. Heard are their views on such subjects as God, race, the bomb, school, themselves and today's society.

The Pacifica stations --KPFK Los Angeles, KPFA San Francisco, and WBAI New York City, have displayed a profound concern with social problems. Two of its programs took up the impact of Medicare and abortion on the physician; another, "Who Killed Davey Moore?" was an indictment of boxing because of the injuries participants receive; another considered the need to extend legal services to all classes of American society.

Interest is Widespread

Often on educational radio a program concept can have much wider interest than originally intended. Archie Greer, manager of WOUB Athens, Ohio observes, "In our 'Thought Junction', the participants are three local ministers. This program was originally intended to be oriented toward things spiritual and moral, but it has gone far beyond that. We have done programs about cheating, student morals and even homosexuality. We feel the series has value not only for students, but for many parents as well, because they are given insights into the thinking of young people."

Educational radio is beginning to devote a great deal of attention to growing problems of the polluted environment. KOAC Corvallis, Oregon has broadcast pollution reports on water and air, and has also presented the proceedings of a water reclamation conference held in its area. WMUK Kalamazoo has had a variety of program discussions: "Pollution: Necessity or Expediency?" ... "Is Pollution Unavoidable?" ... and one which dealt with water pollution alone.

National and international affairs have received extensive coverage. Numerous educational radio stations have debated proposed state constitutions where they are being revised. WUOM Ann Arbor, offered a speech by Senator Wayne Morse which discussed "The U.S. Foreign Policy: What It Should Be." The same station did three documentaries on draft board sit-ins who based their defense on the Nuremberg Trials. WSIU Carbondale, Illinois discussed questions pro and con relating to the House Un-American Activities Committee.

A service which combines community involvement and public affairs is "Model UN," broadcast by KUER Salt Lake City. A project of the University of Utah, the station licensee, "The Model UN" is composed of students from high schools throughout the state. They are asked to represent the various countries which belong to the UN and to study their positions on issues that the UN considers. Then they come to the University for two days to argue as these countries would in the United Nations. The station broadcasts these conferences.

The past 15 years have been notable for the many decisions made by the Supreme Court which reversed its former positions. WFSU Tallahassee, Florida presented a series of lectures, "The Changing World of the Supreme Court," which featured such speakers as William J. Brennan, Associate Justice of the Supreme Court, Ray Forester, Dean of the Cornell University Law School, and Dr. Alphaeus Thomas Mason, McCormick Professor of Jurisprudence at Princeton University. The same subject was discussed in a monthly series produced by WILL Urbana. This series considered "The New Court System in Illinois," "The Illinois Youth Commission and the New Juvenile Act," "The New Judicial Law -- How it Works," and "The Golden Age of Crime," a talk on how criminals evade and use the law, and how modern technology helps them.

Prisoners Tell the Story

There are, of course, any number of public affairs programs which consider miscellaneous topics. WBKY Lexington, Kentucky had a discussion on rock-and-roll music and its effects. A large number of stations have discussed the thorny problems of automation and conservation. Financed in part from a grant from the National Institute of Mental Health, KWCS Pullman, Washington produced a documentary series of six half-hours on prison life: "The Walls of Hope." Participants in the broadcast were prison inmates.

Educational radio is a continuing platform for public-affairs material about international issues that cover the widest range of concern. Produced in conjunction with the Foreign Policy Association by WDET Detroit, "Great Decisions" is a series of eight programs which considered Vietnam, Israel and the Arab World, Western Europe and the United States, Russia after Khrushchev, resurgent Japan, Latin America and the United States, and foreign policy in a nuclear age. Among the notables who appeared on it were Walt Rostow, General Maxwell Taylor, G. Mennen Williams, Leo Cherne, and (from the State Department) U. Alexis Johnson and William Chapman Foster. This series received wide currency on educational stations and was later picked up by the Mutual Broadcasting System and made available to 500 commercial stations.

Combination Gets Results

Educational stations often combine forces to offer more ambitious programs than otherwise possible. "Midweek Michigan," a flexible 30-60 minute public affairs documentary, is jointly produced by WUOM Ann Arbor, WKAR East Lansing, WDET Detroit, WMUK Kalamazoo and WFBE Flint. It is distributed free to 20 other Michigan stations. Among representative programs:

> "The Michigan Indian in Legend, Song and Word"..."New Mathematics"..."America's Race for the Moon"..."Automobile Safety"..."Draft Quotas and Dodgers"..."Black Power and Civil Rights"..."Live Election Analysis"... "Coins -- The Shortage."

As noted earlier, a large number of outside organizations and universities now supply educational radio with considerable programming. These include:

The Johnson Foundation
The Edison Foundation
The Center for Study of Democratic Institutions
The World Affairs Institute of San Diego State College
The British Broadcasting Corporation
The Canadian Broadcasting Corporation
Cooper Union
The University of Chicago
Northeastern University
Rutgers University

Programs supplied by these and other groups feature outstanding authorities on international and domestic affairs. Some examples:

> "Prospect for Southeast Asia," produced by the Johnson Foundation and consisting of 11 one-hour programs. It was taken

from a symposium held in the fall of 1965. Topics: "In the Beginning -- China;" "Vietnam and its People;" U.S. Foreign Policy: Idealism and Reality." Thirty-four participants, all with important credentials, contributed to it.

From the first significant conference on American-Chinese relations since the Communists rose to power in China came another series of five programs. Among participants were Senators George McGovern and Peter Dominick, and the Chinese Ambassador to the United States. The series was also sponsored by the Johnson Foundation, which similarly was responsible for "Pacem in Terris - The International Convocation on World Peace."

Georgetown University produces a weekly series of half-hour forums and symposia which now number more than 1,000 individual segments. Topics include: "Man in a Changing Environment," "Human Misery: Our World Challenge;" "The Sino-Soviet Rift: U.S. Policy Alternatives;" and "Medicare: What Will It Do?"

From the 24th Annual Institute for World Affairs at San Diego State College came "War: Instrument of Change or Invitation to Disaster," a series of 13 lectures.

From the University of Chicago have come two series, "From the Midway," and "Best of the Nitelines." Among subjects considered were labor, urban affairs, and Negro problems.

From the BBC came a series on race and racism and its effect on Africa, the subject of the 1965 Reith lectures.

Cooper Union has made lectures available to educational radio audiences since the early 1950's. The two latest in its continuing "Cooper Union Forum," are "Signs of the Times" and "The Emergence of Mankind."

A Rutgers University series featured Richard Heffner conducting a series of interviews. Among the subjects discussed was planned parenthood, the rising juvenile crime rate, availability of narcotics, violence in our society, and the new psychiatry.

This is but a partial list of the numerous public affairs programs which have been heard on educational radio. The full list indicates that there are very few -- if any -- subjects of importance which have not been considered by the medium. In the area of public affairs, listeners are well served by educational radio.

COMMUNITY AFFAIRS

Traditionally, college or university-owned stations, the standard-bearers in educational radio, have had two chief objectives: to serve their students and to provide cultural enrichment for their communities. This they do to the ultimate gain of many.

Yet the most heartening development in educational radio is a movement in a different direction: to become a different kind of force in a community, one which focuses upon daily life and daily concerns, serves the need for local information, for discussion and airing of local issues and for facing common problems.

Today, in many cities, educational radio has become a most important community resource. It informs as to local events. It fosters the use of local facilities--municipal parks, playgrounds, nature centers, fine arts centers, libraries, theaters, art galleries, museums. It give minorities a platform on which to air grievances. It provides local government with another channel to reach citizens, and offers information as to jobs, local business, hobbies, health and health services.

Take WGUC Cincinnati as an example. This station broadcasts a distinguished schedule of cultural fare. But in addition, last year the University of Cincinnati station presented 136 programs dealing with community needs and problems. These were produced in cooperation with the Board of Education, the Parents-Teachers Association, the Hamilton County Juvenile Court, the Board of Health, the Taft Engineering Center (water pollution), the Kettering Laboratory (air pollution), the Public Library, the Council on World Affairs, the City Planning Department, Urban Renewal Department, Jewish Family Service, Society for Prevention of Cruelty to Animals, Playhouse in the Park, and the Art Museum.

Schools of All Sizes Participate

The Ohio University Station, WOUB Athens, reaches deep into local news and events. Its reporters cover the City Council, and the Board of Education; it interviews the Mayor and other leading officials of the city--the fire and police chiefs, the president of the City Council, the safety director. There are news and sports features about local high schools, safety advice, tips on hunting and fishing.

Another major development for community services has been the growth of the public school stations. These include those which are primarily used for in-school instruction, and those operated by high schools. KBPS Portland, Ore., is representative of the former; WNAS New Albany, Ind., of the latter.

A few in-school stations have lengthened their broadcast days into the evening and begun to program a greater proportion of community services. KBPS presents PTA series, mental health series, programs for senior citizens, college lectures, and speeches by experts in many fields. Leaders and discussion groups for many of these series have been developed and tapes of broadcasts placed in the public libraries.

WNAS, reportedly the first high school station, provides numerous community serivces. Here are three created by this student-operated station:

> "Tabloid," a daily quarter-hour of local news in depth, has such regular features as admissions and dismissals from the Floyd County Memorial Hospital, reports on local boys in the Armed Forces, events at the high school, interviews with executives of local organizations conducting charity drives, and reports of school board meetings.
>
> "Call and Comment" is a twice-weekly quarter-hour that provides an "open line" for commentary on local issues discussed by authorities.
>
> "Community Chronicle" is a calendar of the meetings and activities of local clubs, Lions, Rotary, etc.

Such programs are common to a large number of educational stations. Many also feature reports from Congressmen and other legislators. Some examples: "Report To The People" on WPLN Nashville features Tennessee's Senators and Congressmen. KDSU Fargo alerted local citizens to the problem of flood control in a documentary, "The Raging Red," about the Red River Valley Flood of 1966. KUSD Vermillion, S. D., aired a special on pollution of the nearby Missouri River. Current community problems in Lexington, Ky., were covered in three documentaries on WBKY about food boycotts, and gas and transit strikes.

Large and Small Cities Differ

Many stations are located in rural areas which do not have the urban problems troubling our cities. Yet those in large cities are rising to the challenge of giving minorities a voice on their facilities.

Here are a few examples:

> WUOM Ann Arbor, Mich., WBFO Buffalo and WAER Syracuse, among many other stations, have an "Urban League Report."
>
> WBFO's "Focus on Foods" provided low-income homemakers with information on the preparation of nutritious but inexpensive meals. "I don't believe this program ever reached the audience it was intended for," says William Siemering, the station manager, "probably because of lack of publicity." The same station's "To Be A Negro," mentioned previously, consisted of panel discussions with various members of the Buffalo Negro community in an effort to make Whites more aware of Negro attitudes and feelings.
>
> WHUY Philadelphia broadcasts "Frontlash," comments about integration, and did a special on the "Opportunities Industrialization Center," a unique organization of poor Negroes and Whites who combined forces to create jobs for themselves.
>
> WBKY Lexington, Ky., in this border state, has given time to a Negro community group, which talked about the need for community action to improve working conditions, education and housing.
>
> WMUK Kalamazoo, Mich., uses its "Let's Get Together" series to air a variety of community relations subjects. Topics include: "Civil Rights or Civil War?"..."The Police and Community Relations"..."Human Relations and Social Services"..."Civil Rights Law In Michigan."

An illustration of an unusual format employed to provide a multitude of services to the community is "Conference Call," broadcast by WBUR Boston. Its objective is to extend the resources of Boston University, the station licensee, to the community and moreover to involve them in the program. In its first year on the air, 250 representatives of local, state and private organizations as well as many individuals participated. Subjects covered included social welfare, water resources, air pollution, urban problems, public correction, mental and public health. "Conference Call" phones an expert on the subject and interviews him; calls have been made to points as distant as Berkeley, California.

The commentator series on the Pacifica stations features a spokesman from the community giving his ideas on a variety of current social topics. They are allowed to appear on this quarter hour as long as they have anything to say.

Topics: Assimilation, Beautification

With the increase in foreign students at American colleges, communities must be able to accept and integrate them. Many educational stations have made this possible by interviewing students about their backgrounds, and the differences between the customs of their lands and ours. WBAA Layafette, Ind., has, among many other stations, long had such a program.

Educational stations have also covered in depth subjects which relate to community concerns. WBFO broadcast the full proceedings of a two-day Model City Conference, called to inform the public of the opportunities available to cities under the new government program, and also to define the role of colleges and universities in it.

Among the subjects discussed were urban renewal, economic opportunity and cultural programs; the "New Federal Program: A Challenge To The Cities;" Buffalo's response to the Model City Program; the job ahead for social action and for the community planning program.

More information is also being provided about jobs by educational radio. The Oregon Job Fair brought together 1,500 industrialists and students to explore job possibilities, and KOAC Corvallis broadcast programs about it. A symposium on the job outlook in education in Michigan was held, and WUOM Ann Arbor broadcast it. A program about career opportunities in the power industry was presented by WFCR Amherst. And, of course, numerous features have been done about the Job Corps by stations throughout the country.

Many stations have also taken a larger look at problems which underlie a region's or a city's economy. Located in Carbondale, Ill., a pocket of poverty, WSIU has covered recreation as a resource in southern Illinois, and analyzed the need of the area to attract tourists. (The conclusion was that there more and better housing might solve the problem.) KSAC Manhattan, Kansas has approached the subject in the same way.

Health is another overriding concern of the citizens of a community. A variety of programs have been produced about this subject. They include "Guarding Your Health," on KWSC Pullman, Wash. This production detailed the major medical and health facilities of Whitman County. A symposium on community health care was presented by WKTL Struthers, Ohio, a high school station.

Social health problems have also been treated. These include "Mental Health Projects" on WILL Urbana, an account of one group's work to aid mental health in that community, and an account of the work of the Greater Lansing Alcoholics Information Center which was broadcast on WKAR Lansing, Mich.

A much more severe mental health concern was explained in six documentaries produced by WOUB Athens about the mental hospital in the city.

Leisure-Time Activity Covered

Community programming also means serving the leisure-time needs of listeners. Home gardeners are particularly fortunate, as there is a wide variety of services on this subject. These include WUOT Nashville's "Home and Garden Show" and KOAC's "Weekend Gardener." KSAC Manhattan, Kan., gives special horticultural information in its "Agriculture Today" program. Among topics covered in one week were landscaping the entrance to the home, use of trees in the landscape, patio plantings, flowers in yards and borders, and weed control. This program received 1,057 requests for bulletins.

Local personalities are also not neglected. KWSC in Pullman presents "Paging People With Peg," interviews with local personalities. In Philadelphia, WHUY's "Eleventh Hour," gives listeners a chance to come in and tell their unique experiences to the listening public. The Wisconsin State Network has created a program from "Letters From Listeners" and asks them to write and make their needs plain.

Educating The Adults

Education at the elementary school level is not neglected. The in-school stations devote much air time to parents, but college stations cover the subject, too. A program about education on WILL Urbana has proven itself particularly valuable to local PTA groups in that city. John Regnell, program director of the station, observes, "We think we do a good job to stimulate the parents to think about issues in education. At many of the PTA meetings, they're at a loss for ideas to discuss. We know our programs stimulate a lot of conversation because the groups ask us for tapes and transcripts."

Though a good start has been made toward providing community programs by educational radio, much more remains to be done. Many colleges which own stations evidently give the needs of their communities for special information a low priority on their list of objectives. If station budgets were larger, this would not need be a problem because, in many situations, there is sufficient air time available for such services. But, given the minimum budgets under which many stations operate, it will remain a troubling situation.

Moreover, in too many cases, the minorities do not know how to use radio facilities available to them. They are unfamiliar with educational radio broadcasting, and do not realize that if they were to prepare materials (as inthe manner of the League of Women Voters, etc.), the stations would be glad to air them. Perhaps also the minorities are too busy coping with more severe problems of jobs, housing and prejudice to spend their limited resources on a communications medium. Whatever the case, if minorities are really to make full-blown use of educational radio, it seems apparent some assistance must be rendered them. The medium's potential as a community communications channel remains to be fully utilized.

Service to Local, Regional and National Organizations

Educational radio serves a large number of national, regional and local civic groups, plus local, state and national bureaus, agencies and charitable causes. Among them are the League of Women Voters, American Association of University Women, YMCA, YWCA, Urban League, Junior Chamber of Commerce, 4-H Clubs, Parents-Teachers Associations, Boy and Girl Scouts of America, United States Army, Navy and Marine Corps., and a host of organizations concerned with health.

Their use of the educational radio facilities is only limited to their ability to produce broadcast material, and their ability to cooperate in lending themselves to its programs. Public service spot announcements are readily accepted, but the dedicated organization with a cause that needs attention goes much further. Its representatives make themselves available for interviews. When a charity drive is to be mounted, the organizers provide interesting people to talk about it. When a cultural cause -- music, drama, etc. -- is being fostered, a sample performance, perhaps shortened, is put on the air. Whenever and wherever possible, the educational station will give the groups much aid and assistance in preparing material for broadcast.

To illustrate, WSIU, Carbondale, Illinois, among many educational stations, has helped prepare programs for the Voice of America. One consisted of interviews with foreign students who attend Southern Illinois University. They told of their experiences in this country. Not only are such programs broadcast overseas by the Voice of America, but the British Broadcasting Corp., as well as many foreign government radio services, pick them up and rebroadcast them.

Still a further step is taken by many other organizations which use educational radio. The Illinois Housing and Urban Renewal Department, for example, decided that the public was not fully aware of changes in housing laws in that state. The department created a series which detailed such changes. KDPS, Des Moines, also lent its facilities to the Parents-Teachers Association of Des Moines for a series about children, "Three to Grow," which the station later circulated to many other stations in Iowa.

KFJM Grand Forks, North Dakota, provides another service. It is training eight members of the League of Women Voters to write and produce a series about political issues which concern them. Training those groups which wish to make use of educational radio is another important service of this unique medium.

SERVICE TO SPECIAL AUDIENCES

In terms of providing services for special groups, educational radio has barely scratched the surface of possibilities. It is, however, already serving such groups as the aged, the blind, parents of handicapped children, the homebound and disadvantaged child, teachers and veterans. The largest amount of attention is being given to the aged and the blind.

Numerous lectures have been aired on subjects which concern our older citizens: "The Challenge of Aging" and "The Sociology of Aging" are two examples of this kind of program. Among the series are "Sixty Plus," broadcast by WOI Ames, Iowa, and distributed to a large number of stations. It consists of news and discussion among hosts who themselves have retired. Another program, "The Challenging Years," produced by KBPS Portland, Oregon, an in-school station, counsels older citizens. One segment concerned itself with a grandmother who adopted a family. This station also has a Senior Citizens Community Council program. WKAR East Lansing, Michigan, advises older people on ways to get the most from their Social Security benefits. The host on the show, "Your Social Security," is a representative of the Michigan Social Security Administration. Many programs, too, have been devoted to Medicare on educational radio stations.

Important to the Blind

The blind obviously find educational radio a very important service. A great many stations present "Chapter A Day," which consists of readings for all listeners, but which the blind particularly find useful. WPLN Nashville has its own half-hour reading program for the blind, and KSLH St. Louis, an in-school station, does a 15-minute story hour for children at the Missouri School for the Blind. Among others, "Turning Point" is a series created by the Wisconsin State Network which highlights decisive moments in the lives of blind people.

Still other services are provided. WSIU Carbondale records material for the blind to create a special archive for them at the University of Southern Illinois. KOAC Corvallis, Oregon, records books and plays for the blind to be used at the Multnomah City Library. WFPK and WFPL, Louisville Free Public Library stations, provide material to the Kentucky School for the Blind from their extensive tape archives. A blind professor at this school received a Masters Degree in literature by using the tape archives.

As explained in the "in-school" section, the handicapped and disadvantaged child is beginning to be served more and more by educational radio. WNYE, New York's "High School of the Air," places 600 FM receivers in homes with such children to teach them via radio. KBPS, through federal funding (Title I, ESEA), has produced four in-school series for disadvantaged children in Portland. These are "Story Corner," "Teen Line," a newscast for slow learners and broadcasts of the writings of children.

WBGO Newark, New Jersey Board of Education, is giving a course for 1,700 youngsters for "Operation Head Start" through private funding. Though normally off the air last summer, the station remained on to produce "Tell It Again," and this year will offer "Mr. Saymore Says" and other shows for children, particularly shut-ins.

Parents Are a Special Group, Too

There are numerous services available to parents on educational radio which concern themselves with the psychological health of their children and their children's elementary school education. WAMU Washington, D.C., has broadcast a program about the handicapped or "problem" child. In addition, KDPS Des Moines, Iowa, lent its facilities to the Iowa Association for the Mentally Retarded. The group is producing a monthly program which the station is broadcasting and distributing to other Iowa stations.

KFJM Grand Forks, North Dakota, in cooperation with the University of North Dakota's Department of Occupational Therapy, is training five people interested in the subject to produce their own program about it. It will consist of interviews with therapists and patients, the aim being to encourage an understanding of occupational therapy.

In sum, while the range and scope of services for special groups is growing, it is obvious that educational radio has a long distance to travel before the potential in this area is fully realized. There is a growing belief among educational broadcasters that ultimately a major breakthrough could occur through the use of sub-channel multiplexing on a wide scale.

NEWS

In a medium where the commercial stations present capsulized news on the hour virtually on a 24-hour basis, educational radio has been able to carve a unique niche for itself: to treat the news in depth, to go beyond the headlines and to analyze, interpret and comment. This is not to say that educational radio does not offer spot news--it does, particularly in localities where there is a shortage of stations--but to make the point that perhaps its most valuable service is the former one.

At the outset it should be emphasized that news is not always separated from other programming services. WBAA Lafayette, Ind., has a "Morning Report" which runs from 9 a.m. to 10 a.m. and contains a great many other features, particularly material of interest to women. This type of service is quite common on many educational stations. John De Camp, the manager of WBAA, observes that "this is a service program that commercial stations generally don't want to do because they don't have the time to produce it, because it doesn't appeal to a mass audience, and because they generally don't have the resources to include all the features we can. Its pacing is probably not quick enough to retain the interest of the people who listen to music on a commercial station, but our listeners find it of value, according to what we've been able to learn over the years."

Several Views of the News

To return to educational radio's intensive treatment of news, quite a number of stations have their own commentators. Among those well-known are the award-winning Louis Lyons, WBGH-FM Boston, and Raymond Swing, WRVR-FM New York. WAMU Washington, D. C., has presented "A Political Scientist Looks At The News," which featured one of the members of the faculty of American University, the station licensee.

Magazines and newspapers are extensively analyzed. "Page Two," produced by WSIU Carbondale, takes a look at editorials from various leading newspapers around the country to see how they differ on vital issues. KUAC Fairbanks, has "Alaska Opinions" which considers editorials from newspapers in that state.

Various aspects of the news are detailed in great depth. Religious, business, legal and women's news are covered. Numerous stations have road and safety news. Medical news is another feature, with WSIU Carbondale; KUER Salt Lake City and KUOW Seattle being only three among the many stations that present it. Ralph McGill, editor of the Atlanta Constitution, reads news to children over WABE Atlanta. KUER, also has a once-monthly Spanish-language news program for the Mexican population of Salt Lake City.

Located in three communities which are particularly interested in art, the Pacifica stations give much time to art news. They have a 30-minute art review of showings in local galleries and museums. These three stations, KPFA San Francisco, KPFK Los Angeles and WBAI New York City also offer news of the cinema, books and the theater. This type of coverage to the fine arts, incidentally, is available on many other educational stations. Among Pacifica's more unusual presentations is "CQ ES QST DE KPFA," 15 minutes of weekly news for amateur radio fans. It is broadcast over KPFA.

Weather is Watched

Weather news, of course, is given intensive reporting. The Wisconsin State Network, for example, gives weather forecasts and round-ups, as well as road reports and ski reports which tie in closely with the weather. Other stations, especially in the farm belt, keep the weather bulletins coming on an all-day basis.

International news gets very heavy coverage. WUOM-FM Ann Arbor, Michigan, uses short wave radio to monitor foreign news broadcasts. WBAA's " Continental Comment" presents translations of news from the foreign press through its Modern Language Department. This program accents news material not carried by the major American wire services. In addition, many foreign countries make press reviews of their news available to American stations. They include Sweden, Germany, Canada Great Britain, the Netherlands, Belgium, India, Australia and Israel. Not all of these press reviews are to American tastes. Some educational station managers complain that they are paced too slowly, but the hungry listeners are not so critical.

Local news is always important. Great weight is given to local and state government affairs and local events. City Council meetings are often covered by remote equipment, or are taped; Board of Education meetings are also presented by some stations. State conventions are broadcast. Candidates are given air time. Elections, regular and primary are covered. The governor's "state of the state" message is presented.

Typical News Schedules

Here are the news schedules of several stations:

Each day, WMKY Morehead, Ky., in a city of 4,180 people, offers five five-minute newscasts, one 15-minute newscast, and two five-minute newscasts about campus events at Morehead State University. This low-power 10-watt station supplements its own presentations with "Law In The News" and "Business Review," received from other stations and broadcast once weekly.

In its 12-hour broadcast day, WSUI Iowa City, Ia., presents two five-minute newscasts, two a half-hour in length and one which runs 15 minutes. On Saturday it has a quarter-hour synopsis of the most important weekly news. Besides using the outside news services, it puts together its own "Science Report."

WSIU Carbondale, reaching out to 900,000 people in its area, presents six five-minute newscasts, four ten minutes long and one which runs an hour during the day. Moreover, its "Report From Springfield" interviews state legislators and other figures close to state government.

The Wisconsin State Network offers a great deal of news. Programs include "Views of the News," consisting of faculty specialists analysing editorial opinion; "Quiz The Professor," a weekly hour in which leading faculty members are questioned on controversial issues; "On The Record," interviews with state and national leaders; "Exploring The News," a weekly in-school broadcast of news for children; "The Governor's Report," weekly interviews with the head of the state; "Our Campus, The World," faculty and students report on their experiences abroad, and "Radio Journal," opinions from a variety of students.

Distinguished Record of Service

During January to May 1965, KUOM Minneapolis - St. Paul rendered "distinguished service" to its citizens. It presented 52 different programs from its state legislature. Not only did this series feature material about current issues, but it went into the nature of the legislative process itself. Subjects included re-apportionment, sewage disposal, agricultural research, higher education, taxes, the role of caucuses and parties, how a bill becomes law, and politics and conservation.

To increase and deepen their news coverage, many stations also offer news specials. Last year, KOAC Corvallis presented several. One was a two-hour special of the dedication of the Astoria Bridge. Another was an hour special, "The Interstate Five Story," about the highway. Another hour took up the hearings on the Federal Forest Lands in the state legislature. KSAC Manhattan, Kansas, did a 30-minute news documentary detailing the governor's flying visits to new industries in Western Kansas.

Educational radio can be a powerful communications channel to meet a news emergency. When Boston had a five-week newspaper strike in April, 1966, WBUR presented five hours of news and information throughout the evening. Its "Newspaper of the Air," brought the listener features he didn't get from other emergency news services --columnists (Walter Lippman, James Reston), TV listings, comic strips, etc. Altogether the station logged a total of 120 hours of news and information. For its service, it received the 1967 Tom Phillips Award from the UPI Broadcasters Association, topping many commercial broadcasting stations in Massachusetts.

Educational Goes International

Another instance of unique news coverage was the first live international hook-up of Educational radio in the United States. This was done for the West German National Elections which were carried by 70 stations. This three hour broadcast cost $12,000, the funds coming from the German Information Center.

There are still many stations which present little or no news. In some cases, they cannot even afford the funds for a news wire service. In others, they believe that the commercial stations nearby are doing an adequate job. But many in the latter group are having second thoughts. One sign of their awakening interest, according to a station manager of long experience, is that in more and more instances, when they have a choice between increasing their record libraries and buying a news wire, they take the wire service.

No shortage of sports coverage exists in this country. But educational stations, particularly those owned by colleges and universities, with the interests of their students in mind, continue to deepen and broaden this service. This usually consists of sports commentary, interviews with leading college athletes, and either tape or remote play-by-play of games. Where educational radio does provide an additional sports service is as an origination center of many important college games for commercial stations. And in addition, the high school stations are covering high school athletics.

The range of news services, in short, keeps growing steadily.

GENERAL EDUCATION

For adults interested in learning, educational radio provides a constant stream of knowledge. Listeners are given a vast aggregate of information about labor, politics, government, foreign affairs, history, education, the arts, the physical and social sciences, medicine, economics and other subjects.

True, much programming on these topics will include material of limited value to the average listener, inasmuch as it is more directed to students and those with strong intellectual interests. Thus, there are many lectures and discussions about classical education, Greek and Roman history, and so on. Yet educational radio today also reflects the changes and ferment occurring in American education, its emphasis on the physical and social sciences, and the accelerated movement toward a greater involvement with the general community. Consequently, educational radio audiences are receiving a larger amount of informal adult education which relates directly to many of the central issues troubling our society.

Here are a few examples:

> On KUOW Seattle: "Technology, Change and Society," and "Violence in the American Experience."
>
> On WAER Syracuse: "The Great Society."
>
> On WGBH Boston: "The Politics of Privation" (Africa and racial problems).
>
> On WAMU Washington, D. C.: "The Meaning of the Population Explosion."
>
> On WBFO Buffalo: "The Nature of the Protestor: Rebel or Rabble," and "Pornography," a three-part discussion from three viewpoints.
>
> On WUOM Ann Arbor: "Women in the Labor Market," and "The Human Nature of City Planning," 13 half-hour programs concerned with historical, legal, social and architectural problems.

On KOAC Corvallis: "World Peace Through Law."

The range of informal adult education can best be illustrated by the eight lectures given last year over WILL Urbana, Ill. Along with such subjects as "Concepts of Ordered Liberty," and "Power and Obligation in American Foreign Policy," were included programs entitled "Headstart: Past, Present and Future," "Science in Contemporary Society," "What A Great Time To Be Young," and "The American Socialist Movement in the 1930's."

Discussion Goes Deep

Such subjects are also explored in great depth. "Men and Universities," a 13-week series about the men who have influenced the development of higher education in this country was produced by WFSU Tallahassee; and "Writing With Writers," 12 quarter-hours covering writing from non-fiction to popular verse, featured interviews with practicing writers.

Though the lecture is the most popular vehicle for informal adult education, it is by no means the only one. Reports, documentaries, roundtables, speeches, and interviews are constantly used. "Portrait of The American" is a WDET series which illustrated the diversity of the American character through references to literature. It grouped its 13 programs around four themes -- innocence, affluence, the success myth and the quest for self. Each program consisted of analysis and commentary, interviews, dramatizations or dramatic readings. Another program which has served the cause of informal education is WBFO's "Dialogue on Faith." It features three spokesmen from the leading religions discussing religious issues and developments.

Though educational radio covers a wide variety of subjects, it naturally gives more weight to some than to others. These include history, languages, physical and mental health, business, science, safety, family life and women's affairs. Virtually every station presents the history of its state and locality as part of its regular schedule. Often this is broadened to include a much wider general area: "The History of the Northwest Territory," for example, was broadcast by KWSC Pullman.

Minority Groups Are Involved

The history of minorities and special groups is also offered. Several programs about Negroes and Indians cited in the public-affairs section of this report give listeners considerable history about them.

KUAC Fairbanks, Alaska, has in preparation a program about Eskimo Legends, which is another way to touch on the history of the territory.

Programs also produced by outside sources are historical in content. The British Broadcasting Corporation's series on "Frontier America," for example, covers the Chisholm Trail, the Lawless Frontier, and the Last Frontier.

Historical figures are also brought back to life on educational radio. WSUI Iowa City presented documentaries about Winston Churchill, John Kennedy and participants in the Battle of Britain. From WMAQ, a Chicago commercial station, has come, a series entitled "The March of Medicine." The programs, which are replayed on educational stations, dramatize the lives of Florence Nightingale, Walter Reed, Joseph Lister and Louis Pasteur.

Among the leaders in creating more imaginative ways to present historical material has been WUOM Ann Arbor. With the assistance of a grant from the National Home Library Foundation, it has produced seven one-hour programs, "The American Town, A Self-Portrait." The series delves into the history and industry of small towns and regions of the United States. WUOM is also responsible for "Union Voices," a series of 26 quarter-hours which tells the story of the American Labor Movement through its music.

Learning Language By Listening

Those interested in foreign languages have a number of services to select from. Simple French, German and Italian can be heard on many stations. WBAA Lafayette, Ind., has broadcast conversational Spanish, German and Russian. The Russian was given as a course and had an enrollment of between 200 and 300 people. The language department of Purdue University cooperated with the station.

Other language broadcasting was done by KUOW Seattle, whose German course was an adjunct to that offered by the educational television station of that city. Third-year French and Spanish was given by the Wisconsin State Network as part of a course, and WHUY gives readings in Spanish literature.

Educational radio makes many services available to those who want to learn more about science. There are many individual lectures about different aspects of science, and about the impact of science on contemporary civilization. The California Institute of Technology, however, in "About Science," a continuing series which features many of its faculty, concerned itself with airplanes, comets, the oceans, pollution, the space program, seaweed, life on Mars, earthquakes and faults, sand dunes, color-vision, man-made African lakes and artificial intelligence. Another half-hour program for the less-informed listener is the "BBC Science Magazine." This half-hour show consists of short reports and interviews on the latest advances in science and technology, couching them in terms understandable to the layman.

Perhaps the one group of listeners for whom educational radio offers the greatest adult informational service is the female listener. A large number of leading educational stations broadcast programs which enable her to become a better wife and mother, food buyer and nutrition expert. Karl Schmidt, program director and production manager of WHA Wisconsin, observes: "In our program, 'Accent on Living,' no longer are we concerned with offering only pickle recipes. Several years ago we began to get indications that we should enlarge the focus and move away from merely homemaking. Women are now expected to play a new and broader role in society. Now we give them drama and literature, material on conservation, consumer fraud, laws and the family, preparing the garden for winter, women's changing roles, and consumer nutrition education."

Women Form Special Audience

Virtually all stations affiliated with universities involve their home economics departments in these women's programs. WFCR Amherst, which is affiliated with three schools of higher education, calls its women's program "Conversation." Among the topics covered are "The Age of Mass Consumption," "Residential Site Selection," "Man and Nutrition," "Kinds and Costs of Credit Plans," and "Urbanization and the Individual."

A monthly series produced by the Pacifica stations stresses protection against con men by giving readings from judgements made by the Food and Drug Administration. On KPFA Los Angeles, and KPFK San Francisco, Pacifica also presented a report of six years of activity of the Office of the Consumer Counsel of that state. To move to an even deeper area of female concern, the Pacifica stations presented "The Challenge of Women: The Biological Avalanche," which dealt with the impact of the new birth control pills on their femininity.

In addition to programs specifically directed to women, educational radio has a multitude of services which concern themselves with child rearing, family planning and mental health.

In WHUY's "Symposium on the Child," Professor George Tarpan discussed organic, cultural and social considerations of the youth explosion, the development of intelligence, and some current issues in mental retardation. "These Are Our Children," produced by WSUI Iowa City, detailed problems in parental education and children's development.

There are many other similar programs. Among them:

"Introduction to Child's Behavior" on KANU Lawrence, Kansas.

"The Premature Baby" on WSIU Carbondale.

"The Problem Child" on WAMU Washington, D.C.

"Family Living Conference" on WUOM Ann Arbor.

"Family Planning" on WAER Syracuse.

"The Impact of the Space Age on the Family" on WGUC Cincinnati.

Among the more unusual programs is "Exploring the Child's World," a production of WDUQ Pittsburgh. It consisted of interviews with severely disturbed children and juvenile delinquents at the Allegheny County Juvenile Detention facilities. The focus was on the child, not the solution.

Medical Men's Medium

There also is a profusion of health services on the medium. "Doctor, Tell Me," produced by KUOM Minneapolis, is a five-minute program in which a doctor from the area is interviewed about specific questions submitted by listeners. Topics are not restricted to those of local interest and the program receives a wide circulation through the National Educational Radio Network.

Other programs in this category are:

"Medical Center Report" on KUER Salt Lake City.

"Rx for Health" on WUOM Ann Arbor.

"House Call" on WOI Ames, Iowa.

"Your Health and You" on KUOM Minneapolis.

"Health Science Today" on KUOW Seattle.

"Pharmacy Facts" produced by KCUR Kansas City, considers drugs, medicine, pollution, poisons and food additives. Some insight into the way science-age charlatans work is given in "Quackery: Facts or Fallacy," a production of KOAC Corvallis.

An important program about a much-feared killer, cancer, was produced by the National Institute of Health and NER, and was given wide exposure on many stations. Among the subjects treated in separate programs were development and use of drugs, mathematics in cancer research, treatment, diagnosis, trends, search for cancer viruses, cancer and man's environment, and biochemical research in cancer.

Safety, in the home and on the road, is another subject in which the educational stations do much to educate. Much effort goes into inserts and special features in women's programs. Often, interviews are held with local and state safety officials, particularly as the holidays near. A different aspect of safety was covered by WILL Urbana, which interviewed an executive in an insurance company who discussed fire safety.

While business affairs are not commonly covered in any great detail by educational radio, a sprinkling of services offer some information. WAMU Washington, D. C., presented the proceedings of a conference on business-government relations which was held in Washington. The same station is also responsible for "It's Your Business," the objective of which is to broaden the listeners' comprehension of business. The Far Western stations generally offer more of this kind of program than do other sections of the country. KOAC Corvallis, Oregon, has done a special on tight money, and has another program called "Investment Forum."

KSAC Manhattan, Kansas, has had a series of different programs throughout the year whose objective was to stimulate "grass roots" action to encourage the state's future economic development, according to Jack Burke, director of the station. Three different series figures in this year-long effort: "Kansas Afield," "Projection," and "Perspective."

"Kansas Afield" is a continuing source of information about wildlife conservation and outdoor recreation, but the format was broadened to include the business potential of rural recreation. Listeners were shown the interest in fee fishing, fee campgrounds, shooting preserves, swimming and picnic areas and farm vacations. "Projection," a series of five-minute programs, dealt with the broad spectrum of development, including new industries, recreation and travel, defense and defense contracts, research and development, and promotion and planning. "Perspective" was a series of documentaries: one dealt with the proposed Prairie Parkway and its potential for increasing tourist traffic; another showed how the Kansas economy fared in 1966.

Programs Are Provided

To return to services which are of a general nature, each year sees a greater amount of such material released to educational radio by outside sources. Most of this material comes from conferences, symposia and other gatherings of academicians and experts, conferences referred to elsewhere in this report. In some cases, colleges without educational radio stations submit programs to stations. In others, government or other agencies supply programs. In any case, whatever the source, educational radio and its listeners are only the richer for it.

Educational radio does not offer any direct courses for credit to the casual listener; it does, however, offer credit courses for students in numerous subjects. These include psychology, social welfare, the American novel, American and British government and politics, the history of the South, Eastern Christendom, state government and politics, national and social change in Asia, etc. Though admittedly only a few thousand listeners may take these courses for credit, on occasion the requests for manuals and study guides indicate more interest than one would expect. This is certainly the case at KUOM Minneapolis, according to Burton Paulu, station director.

Something different from the usual credit course is presented by WHA Madison over its 11-station network. The University of Wisconsin's "Freshman Forum," a one-credit lecture-discussion course, covers wide-ranging subjects with much social content. Of interest to many listeners, the fall, 1966 "Freshman Forum" presented programs entitled "The Urban Environment," "Society: Sound Pollution," "Today's Architecture," "Mobility: Transformation and the Human Environment," "The Case for Wild Rivers," and "Who Determines the Environment?" In the spring, the series covered such topics as world hunger, the use and misuse of water, birth control and planned parenthood, the population explosion, and colonies in outer space.

As in many other aspects of educational radio, the statistics on the numbers of listeners who learn in the privacy of their homes, merely by spending a brief time listening to the radio, are difficult to come by. But cards, letters, phone calls and in-person messages indicate that the totals are certainly significant. Wisdom, knowledge, learning -- in these days of an information flood -- appear to be at every hand; but imparting that knowledge in a meaningful way, so that it can be grasped and understood and assimilated, is often a difficult task. Educational radio, the evidence shows, has mastered that task time and time again.

IN-SCHOOL INSTRUCTIONAL PROGRAMMING

Among the considerable services performed by educational radio is its in-school education programs for elementary and secondary school children. It is a service whose true reach has yet to be defined, although estimates are that it is received by between five and ten million children. The listeners are located in such large cities as New York, Chicago, St. Louis, Detroit, Cleveland, Indianapolis, Columbus, Akron, El Paso, Albuquerque, Miami, and Newark, N.J.--and also in such smaller cities and towns as New Albany, Ind., Eugene, Ore., Lewiston, Ida., Evansville, Ind. and Flint, Mich.

To these children, education is disseminated by several types of stations. First and foremost are those owned by public schools and/or school systems. Here, the primary function of the stations is in-school education. Secondary, but still important, are the "Schools of the Air" and other in-school services broadcast by college and university stations. In most cases, these are sent directly to classrooms, and in a few instances, to other commercial stations which rebroadcast their offerings. The Public Library System of Louisville, through stations WFPK and WFPL, also offers the children of that city in-school education. Not to be overlooked is the service provided by National Educational Radio: through its tape network last year it gathered 13 of the best of the in-school series and made them available to its member in-school stations.

Essentially the in-school service is something of a collective endeavor in which all stations share by taking and giving to each other. This is least true of the large Board of Education station (such as WNYE New York), which has the funds to create and produce its own radio instructional fare. It is more true of the greatest number of in-school stations which do not have similar resources. In Indiana, for example, Purdue University's "School of the Air" is used by some 15 to 20 in-school stations; the Wisconsin State Network's "School of the Air" through its eleven stations feeds an estimated 770,000 children in that state.

Progress and Pitfalls

As in other aspects of educational radio, in-school instruction in some areas is a vital and growing service, but in others is not. The Cleveland Board of Education, for example, reports that WBOE serves 1,986,000 children in and around the city. (In numerous areas, schools outside the main in-school broadcasting systems avail themselves of the service, but do not contribute to it.)

Another sizeable operation is KSLH St. Louis, which in 1950 featured 16 hours of locally-originated series, plus two produced elsewhere. By 1966, this station's broadcasting had expanded to 35 hours, its locally-originated series to 80, plus twelve taken from other sources. On the other hand, the Detroit Board of Education station in 1966 reached only four percent of the city's total school enrollment regularly. In 1948, this station presented 100 in-school series, of which 23 were written by the staff, but by 1966 that number has declined sharply and only three were being produced by the station.

Indicative of many of the problems of small stations offering instructional fare is that of WCYS Yorktown, Va., owned by the York County School Board public schools. The station is now a training facility for high school students at the Adult Technical School, York County. In a state completely without in-school broadcasting, WCYS is attempting to reach the 1,000 school children in the 10 school districts in its county.

It is a relatively high-powered station, but one completely without studio facilities in which to create programming. For that reason, the station combined forces with WCMW Williamsburg a 10-watt station owned by the College of William and Mary. WCYS presents a three-hour block of National Educational Radio in-school programs, but none of them are received in the county schools yet. B. C. Dickerson, Director of the Adult Technical School, observes, "We have found that many of the schools do not have communications systems to receive such programs. Moreover, many teachers do not know the uses and advantages of radio. We have to do a selling job." At this time, the station's budget does not permit the hiring of a producer. The budget is now $1,500 yearly--although some money is added for equipment from school funds for its electronics department.

Accent on the Young

Though a good deal of material is made available for the secondary school student, in-school radio in this television age is directed primarily toward the elementary school child. Because the very young are at a non-literal age, in-school radio has advantages over the print medium. They absorb the material more easily, and it can stir their imagination and curiosity. To many urban children, too, who verge on the non-literal, radio can be especially useful. For the lower grades, music and simple story-telling series are most often broadcast. As the in-school listener becomes older, the range of programming is extended.

Programs, usually a quarter-hour in length, cover such subjects as arithmetic and mathematics, English, poetry, reading, writing, folk tales and legends, proverbs, literature, phonetics, languages (Spanish, French, German, Italian, Russian and Hebrew), geography, physical education, social studies, history, economics, simple psychology , current events, art, science, crafts, biology, astronomy, guidance (personal adjustment, health and safety).

To illustrate, KSLH St. Louis in 1966 broadcast for primary grades a foreign language, language arts, mathematics, music, science and social studies; for its middle grades (fifth, sixth and seventh years), it broadcast programs about foreign languages, guidance, health and safety, science and social studies; for the seventh and eighth grades, it broadcasts material about health, language arts, music, science, social studies and guidance.

KANW Albuquerque, a very different sort of in-school operation, is oriented primarily to the young elementary school child. The station covers a large area because the Albuquerque Public Schools consist of more than 100 units spread over 1,243 square miles. About 45 percent of the population is bi-lingual Spanish; five percent are Negro; five percent are Indian, and seven percent are considered to be disadvantaged Pueblos.

The station broadcasts six-and-a-half hours a day, 60 percent of the time offering locally-originated shows. These are mainly music. Its music appreciation series, "Adventures in Music," is offered to six grades, and listened to regularly by 95 percent of the third-graders. It also offers Spanish placement tests for the Spanish-speaking children. The station has one full-time employee.

Less Costly than Television

For the most part, in-school radio is an enrichment service. The teacher who gives a biology lesson may supplement his materials with a dramatized series about the lives of great biologists. (Drama is a favored form of in-school programming because of its vividness. It is relatively inexpensive to produce because it uses student actors, certainly much less expensive than with in-school television).

A high school class in current events may listen to a speech by a government figure and then discuss it. KSLH's "Let's Find Out" is one of the more successful of the enrichment series. It features a science teacher who conducts the children through simple experiments which fit into schoolroom lessons to follow.

Still, some schools have accomplished much with direct in-school instruction. WBOE Cleveland is an example of a major station used by a school system to profit through direct radio instruction. Here, as in several other public school systems, each program is carefully planned to tie in with the course of instruction.

New Ideas are Utilized

Some of the newer ideas in education also find their way on to instructional radio. WBAA Lafayette, the Purdue University station, is among the leaders. It has produced such series as "The Words We Use," based on a new system of transitional grammar. "Then and Now" takes a cultural anthropological approach to social studies. (One program was about the acculturation and assimilation of a minority group in Hidalgo County, Texas.) "Our Working World" teaches economics for the first grader; "News in Focus," for the first graders, catches interest by dealing with such subjects as the Beatles; and "Creative Thinking--The American Pioneers" is a series that gives exercises to stimulate thinking.

Another leading station is KBPS Portland, Ore., which has to its credit, "Exploring Numbers," a series about the new mathematics.

In large cities in-school radio has been utilized to deal with urban problems. WNYE New York Board of Education station, for example, has produced many series which work on multi-levels to help the children of minorities. The programs give them pride in their ancestry, help give them a sense of identity, give fellow students from different backgrounds better understanding, and generally improve the youngsters' attitudes. Among the WNYE material are "Out of Many, One--A Nation of Minorities," "Peter and Pepe," "Senorita Jones," "People and Places," and "A World of Brothers."

Radio Used To Solve Problems

"When minority problems erupted in New York City," says Mrs. Cecil H. Suffern, Assistant Director of programming at WNYE, "we quickly turned to radio. We were able to create a series that would help improve the image of the Negro. The school system can't begin to get such service from textbook publishers. Under normal conditions, it would take at least nine months or a year to get us such material." The WNYE series is "The Negro In America." It has won several awards. "Glory Road," a series produced by WBGO Newark, dramatizes the lives of prominent Negroes such as Martin Luther King, Harriet Tubman and Mary Bethune. It is the only American radio program to win the 1965-1966 Japanese prize in international competition with 40 countries.

Another social problem, the rebelliousness of youngsters, is also being reduced by in-school broadcasting. "The Tender Twigs," a series of 13 half-hours produced by WFBE Flint, Mich., addressed itself to the social problems of youth in the 20th Century. It detailed the specific steps that can be taken by the individual, the school, community and church to insure accept-able behavior. Subjects considered on this series: crime, mental health, delinquency, social pressures and human growth. They are expounded by a notable group of experts.

Youngsters are also advised on early marriage in WBOE's "For Now--Or Forever," a series later fashioned into a textbook for an English course. The three sections are "My Family and I," about approaches to successful family living; "My Family Today," about the causes of friction between parents and children; and "My Family Together," about choosing a mate wisely.

The vividness that in-school broadcasting can bring to education is exemplifed in "Mike Cable, Special Correspondent," a series produced by WBFE Flint. This program used a fictitious character who roams all over the world, sending in reports from the Sahara, from a lumbering camp in Oregon, from Brazil. The objective is to point out the differences and similarities between all people.

Some educators have complained that children today do not listen as attentively as they might, and have contended that television--with its emphasis on the visual--is at fault. Numerous stations with in-school programs produce specific programs to train the children's aural faculties. Among the programs is "Let's Listen," from WBGO Newark.

The handicapped child, the sick and the disadvantaged, are also served by instructional radio. WYNE has had a "High School of the Air" for 600 homebound and hospitalized pupils since 1949. It offers direct instruction in English, general science, biology, American and world history. The student is given a radio receiver in his home to take these subjects. In 1965-1966, federal funds were made available to serve groups of 15 of these pupils with enrichment instruction.

KBPS Portland, Ore., has also received federal funds for a special in-school radio project aimed at the educationally disadvantaged. It has produced four series for these children. The first, "Story Corner," consists of dramatized biographies of men and women, Negro and White, who have succeeded in spite of difficulties. The second, "Teen Line," is a call-in series for seventh and eighth graders who can discuss issues that concern them. Another is a newscast for slow learners in high school pilot classes, and the fourth is a broadcast of a creative student's work.

Summer Programs are Special

WGBO is doing similar work with "Operation Headstart" children in Newark, N.J. The station, normally off the air during the summer, remained on to produce "Tell It Again," a dramatization of familiar stories, which was heard by 1,700 youngsters. This coming year, the station will present "Mr. Saymore Says," which will consist of a different story in each broadcast.

The availability of instructional television has naturally had an effect on instructional radio. Martin Busch, Director of radio and television for the University of South Dakota station, KUSD at Vermillion, says, "We were serving as many as 35,000 students with "School of the Air," which has been on since 1935. Most of these pupils were located in country schoolhouses, But now even television is going into these country schoolhouses and the number of our pupils has declined. Aside from television, there are other reasons for this decline. At one time we had a full-time person promoting our program. Now we don't. And we haven't had the cooperation of the County Superintendents the way we once did. They haven't supported us."

In New York City, when instructional television began operating, there was a drop in the number of students using in-school radio. Now, five years later, however, radio has surged back. Some 22,000 classes, more than the number which use instructional television, use in-school radio.

The first tendency, once television becomes operative for in-school education, is to make the full curriculum available on the newer medium. But not all subjects can be taught equally well on both radio and T.V. The Wisconsin State Network's "School of the Air" discovered this with "Let's Draw," a proven in-school radio series which it moved to its instructional television facilities. On television the program was a failure. "It was found," says Karl Schmidt, program director, "that the children tended to copy the television pictures we showed them as part of the series. Their imaginations did not work as freely as they do in radio." This same series also is now presented in "Radio-vision," which combines color film strips with in-school broadcasting.

There are, of course, many subjects better taught on radio than on television. "Music, news and drama are better done on radio than on television," observes Mrs. Cecil Suffern, of WNYE, who functions in both media. "Not only do we have to consider the additional cost on television, but T.V. does not add a great deal to the instruction we're trying to give."

Both Media Can Be Used

Wherever possible, the better in-school stations use both radio and television, one to supplement the other. In the same week, KDPS Des Moines, broadcasts T.V. and radio courses in Spanish, literature, English, history and speech improvement, according to John Montgomery, general manager of the station. "Music In Motion" is heard on both the instructional radio and television stations in Eugene, Ore. At WNYE New York, as the city in-school station televises classes in science for high school students, the in-school radio station offers dramatized biographies of leading scientific figures.

In-school radio can be--and is--very useful to teachers. The director of elementary education in the Oklahoma City Public Schools has stated: "An interesting result of listening to 'Let's Find Out,' and 'Voici Mimi,' both KSLH-originated programs, has been the techniques of teaching that teachers have picked up from the 'Science Lady' and 'Mademoiselle Jeanette.'

In-school broadcasting is actually an efficient instrument in training teachers. KBPS Portland, Ore., has pioneered in this practice. As a consequence of the requests of new teachers in the primary grades, the Supervisor of Elementary Education in the city planned a series, "Here's An Idea." It deals with a variety of classroom learning situations which may contain teaching problems.

> Among program titles: "The Non-Singer"... "Listening Skills"... "Independent Activities"... "Tips For Spelling"... Creating Interest in Reading"... "Science Around Us."

Many experienced as well as inexperienced teachers in the Portland school system use this series. The teacher's listen to the programs alone, or often under the supervision of a principal who spots an area of weakness he might like to strengthen.

Other Ways To Teach

KBPS also uses in-school radio for other forms of teacher training. Members of the Superintendent of School's staff speak directly to teachers about specific problems which need to be solved if a better climate for learning is to be created. Talks and interviews are held with distinguished educators who discuss a curriculum problem; series are presented which illumine specific problems relating to a group of specialists, social studies teachers, for example.

Other in-school ideas for teachers enrich them in their specialties. One such series was "Understanding Music," geared to "new music" courses. Another was "The Language Arts," and its objective was to add to the teachers' knowledge of the whole English curriculum. In this last series, a Portland teacher doing advanced work or special research was often invited to report.

The in-school instructional station is also used to bind teachers and parents closer together. The parents listen to the in-school broadcasts themselves and know what their children are learning. WWHI Muncie, Ind., presented 140 interviews last year with teachers so parents could know more about those who teach their children. WEBS Elgin, Ill., broadcasts discussion of the Parents-Teachers Association, entitled "The Adolescent and His World." WMTH Park Ridge, Ill., uses "Main Line" to permit parents and others in the community to ask questions about the school and its problems. WCSQ Central Square, N.Y., presented a program, "Parents Night Activities." It consisted of interviews with parents.

Gains, But More To Be Made

It is clear that the national scene shows great variation in degree of development of in-school radio. Unfortunately, in many areas, it is an underdeveloped medium that is dependent on a relatively small number of institutions for program supply. Yet, at the other end of the curve, some in-school stations are leading the way for the aural medium to serve their communities better--they have lengthened their broadcast days to offer more community programming; they are finding new ways to serve educational purposes through language drill, professional training, lectures, etc.; colleges and universities are using their stations for adult credit course broadcasting, though on a small scale.

At a time when teachers are either in short supply or inadequately prepared for their teaching duties, when the cost of employing teachers is rising sharply, when curricula are constantly being revised and when the demand in urban areas is for more attention to children who have special educational problems, in-school broadcasting clearly has the potential to be of considerable assistance. But support of it must go beyond mere financing. The medium must be completely integrated into the educational system. Educators must be briefed in how to use radio, and must understand what it can do for them. They must see it as a means of teaching children better and faster, of improving the quality of their instruction, of giving additional knowledge to their teaching staff. Then, it may begin to repay the investment that will be needed.

AGRICULTURE

In agricultural services, educational radio serves its farm communities very well indeed. The United States Department of Agriculture's Federal Extension Service, for example, reports that of the 800,000 broadcasts of its material by radio stations in 1965, about half were carried by educational stations.

Since the number of educational stations is small in comparison to the number of commercial stations serving farm communities, the contribution of these stations is obviously impressive. It is also true, moreover, that many educational radio stations which specialize in farm programming -- KASC Manhatten, Kansas, and WKAR East Lansing, Michigan, among many examples -- also furnish many commercial stations in their states with a large volume of programming.

The university-owned educational stations, particularly those owned by land-grant colleges and universities, are those which render the greatest service. These include KSAC, WKAR, KOAC, Corvallis; KUOM Minneapolis; The Wisconsin State Network; WOI Ames, Iowa; WILL, Urbana, Illinois; WBAA Lafayette, KSDU Fargo; KWSC Pullman, Washington, and WRUF Gainesville, Florida

How Diverse Are Their Services?

Perhaps the best way to delineate the extent of their services is to present a picture of what one station does for its agricultural audience. While this station, WKAR has an extremely complete service, there are many others which equal its efforts.

Every weekday the station presents a "farm hour," and on Saturdays it presents two hours of farm programming. In five months each year, during Daylight Saving Time, it also offers an additional morning half-hour of farm news six days a week.

The "farm hour" consists of hard farm news, plus many special features. The news includes market reports direct from the Michigan Livestock Association, a daily report from the Michigan Livestock Exchange, a daily weather forecast by the United States Weather Bureau, and once-a-month reports from the Michigan Department of Agriculture's Crop Reporting Service. Three times a week county agents from Ingham, Calhoun and Eton counties report to the farmers. News is also given about farm organizations that are holding meetings, how to solve farm problems, and the best times to market. Daily interviews are presented with agricultural specialists from the university. Specialists are used from all departments: forestry, agricultural economics, engineering, horticulture, and soil and crop science.

The second half-hour of this program consists mainly of features in which guests predominate. One-minute reports are given by seven farm organizations, the Michigan Animal Breeders, Michigan Allied Poultry Association, etc. Each week the Michigan Department of Agriculture discusses important developments, as does the Michigan Agricultural and Stabilization Service.

In this same half-hour, the university's short course department announces concentrated courses of interest to farmers. Once monthly, a guest from the Michigan Crop Improvement Association discusses seed certification and new seed inspection programs, and gives tips on harvesting. The National Farmers Union also is given time to discuss important matters. Here too, is included material from the Extension Service of the United States Department of Agriculture.

Four Programs In An Hour

The hour Saturday morning block of additional programs consists of four quarter-hours. The Farm Bureau of Michigan and the Michigan State Grange produce their own programs. Another program, "Food For Thought" distributed to 50 stations in Michigan, consists of special interviews with important guests. "Ag U.S.A.," is news, discussions and interviews from the U. S. Department of Agriculture, a special feature.

Produced through the cooperation of the Michigan State Department of Agricultural Engineering, and with a grant from the power companies of the state, "Energy For Living" informs farmers, as well as others, on the old and new uses of electricity around the farm and home. It is sent to 20 other Michigan stations.

Michigan State University, the original land grant college, also has a "Farmers Week" once a year. Attendance is estimated at 25,000 people from all over the country. From it, WKAR broadcasts live speeches, discussions and convocations. These are also recorded and re-played at a later time. Perhaps the outstanding program to come out of "Farmers Week" was that which consisted of reminiscences of five Secretaries of Agriculture, beginning with Henry Agard Wallace and ending with Orville Freeman.

The station performs two other services for farmers. It has recorded 80 spots about safety. These are 30-seconds, one and five-minutes in length, stress the seriousness of farm safety, and consist, in part, of interviews with farmers who have injured themselves. The station has won an award in 12 of the last 13 years from the National Safety Council for this service.

WKAR's Farm Director, Richard Arnold, who is interested in 4-H work, travels the state counseling parents who wish their children to go into farming. He gives them the benefit of his expertise and tells them what exciting opportunities are opening up in farming for their youngsters.

The extent of the knowledge brought to bear on farming by WKAR is visible from the fact that 10 departments of the University's Agricultural Department cooperate with it weekly. During fiscal 1965-66, too, 467 different guests appeared on its farm programs.

Another station, KWSC Pullman, has two regular farm programs, "Farm Facts," daily agricultural news, interviews and commentary, and "Farm Reporter," research information. In addition, this station presents short broadcasts from the numerous farm institutes around the state and of the short courses held on its campus; of area conservation meetings, the Palouse County Fair; the State 4-H Summer Camp and the Washington State Grange Convention.

Here are the day-by-day listings of subject matter on the "Noon Farm Hour" over KOAC Corvallis for better insight into the variety of subjects covered on a farm program:

Monday: Weather; Markets; Wildlife Management; Soil Management; Farm Crops Production; Poultry Production.
Tuesday: Farm Calendar; Daily Management; Pesticide Safety; Dairy Production; Plant Pathology; Farm Engineering.
Wednesday: Strawberry Certification; Seed Certification; Poultry Marketing; Farm Forestry.
Thursday: Farm Management; Dairy Products; Livestock Production.
Friday: Farm Management; Farm Outlook; Dairy Marketing; Fruit and Vegetable Marketing.
Saturday: Entomology; Vegetable Production; Range Management.

Specials Fill In Gaps

In addition to these comprehensive farm programs on a daily basis, many educational stations do farming specials. WSUI Iowa City, Iowa, for example, featured the Department of Farm Medicine at Iowa University, the station owner, in "Farm Problems," which covered farm problems, pesticide, and other medical reports of interest to the rural audience. In its "Agricultural Forum," the Wisconsin State Network addresses itself to a variety of subjects. And, WSIU Carbondale has had a discussion of farm subsidies.

A very different type of service was KSAC's "Rural America: Challenge or Change." The objective of this series of 13 quarter-hours was to give the farmer a broad look at significant developments impinging on agriculture. Topics included:

"Rural Sociological Changes"
"Political Changes"
"The Affluent Farmer"
"Rural America and Today's Technology"
"The Rural Economy"
"Rural Poverty"
"Education and Today's Farmer"
"The Farmer and Government"
"The Population Shift"
"Leisure Time and Rural America"
"Rural America -- Conclusions"

It seems apparent that the farm audiences of this country are receiving a mass of material from educational radio which would otherwise not be presented to them.

CULTURAL ENRICHMENT

It is often assumed that educational radio stations broadcast long-playing classical records from an inexhaustible collection all day long, occasionally interspersing a news report or recorded lecture -- and repeat the process from January to December. Undeniably, that happens in some cases, but it is not the rule.

Music usually does account for the majority of the educational station's programming day, just as with commercial stations. The difference is in the type of music that is broadcast. Where most commercial stations play only the latest popular music, jazz and theatre compositions for variation, the educational outlet often provides the only source of classical music available to some communities.

The educational stations largely serve as the sole outlet for another kind of music: serious works, contemporary works written by modern composers. All too often, the composer of a string quartet or short operatic piece today has no audience for his effort, other than a few dozen or few hundred people who might attend a single performance at a university or school of music. Commercial interests seldom record such works (after all, the composer has no "name"). But tape recordings, broadcast on one educational station and distributed to dozens of others, are providing young composers from this country and others with an opportunity to try their ideas before an army of listeners.

Important as music is, however, the cultural programming that is the hallmark of so many educational stations offers far more. There must be a careful blending of drama, art, literature -- broadly, the fine arts. The skill of educational radio in providing this mixture is the theme of this report.

Importance of Music to Cincinnati

Cincinnati, Ohio, is not the nation's music center, but it has a major symphony orchestra, a famous quartet and an outstanding conservatory of music at the University of Cincinnati. These organizations seldom get air time on commercial radio in Cincinnati. The city's own contribution to American music might be unknown to most local residents if WGUC, University of Cincinnati, did not carry all of these groups, and more. The station's live pickups of the Cincinnati Symphony, summer opera and La Salle Quartet all help residents share the treasures stored in the community.

Even if Cincinnati were not rich in professional music organizations, WGUC can and does turn inward to the University for talent. In cooperation with the College Conservatory of Music, the station produces a half-hour of student recitals each week. And last fall it carried a Sunday afternoon series featuring Raymond Dudley, eminent Canadian pianist and Artist in Residence at the conservatory. An authority on the music of Haydn, Mr. Dudley played and commented on Haydn's piano sonatas in six hour-long programs.

Like many educational stations which are strong in original programming, WGUC makes a practice of recording and distributing for re-broadcast many of its series. Its La Salle Quartet programs are heard in 65 to 70 cities via the NER Network. The Cincinnati May Festival, a choral music series, and the Ohio Valley Jazz Festival are regularly distributed.

How Many From Grand Forks See the Met?

It is not known how many people in Grand Forks, N.D., visit New York City to see a performance of the Metropolitan Opera. But if someone wants to *hear* a performance of the Met in Grand Forks, he can turn to the University of North Dakota's KFJM on Saturday afternoon. KFJM and some 30 educational stations are now joined on the nationwide Metropolitan Opera Network.

The Fine Music Station of Knoxville

The fine music output of the educational stations can be staggering, as illustrated in this recounting from WUOT, University of Tennessee, Knoxville, for just the month of November last year:

Serious music, locally produced with recordings, selected and annotated by a professor of music on the staff	350 hours
Serious music, taped or recorded from the Library of Congress and other national sources	50 hours
Serious music, locally produced with University faculty	2.5 hours
New York Philharmonic Orchestra concerts, taped in New York each week	4 weeks
Contemporary jazz, locally produced with commentary	4 hours
American musical theatre, recorded	3.25 hours

On the "live" side of WUOT's effort last November were several performances produced in cooperation with the university department of Music, faculty and graduate recitals and a full concert by the Knoxville Choral Society. Metropolitan Opera programs have also been added to WUOT's schedule..

Sheer variety in classical music presentation is demonstrated by the evening program schedule broadcast of KSJR, St. John's University, Collegeville, Minnesota. The recorded concerts of five major orchestras are heard each night: the Detroit, Cleveland, Boston, Chicago and Toronto Symphony Orchestras. KSJR also carried re-broadcasts of the Library of Congress Chamber Concerts, and last fall aired 12 programs in The Prague Spring Festival series.

At many university stations special series are built around rare music collections, or around staff specialists expert on a particular phase of music. Most of these make their way into educational network distribution. Among them: "Legendary Pianists," a series produced at KWSC, Washington State University, Pullman, Washington, makes use of piano roll recordings from a rare collection. Performances are by the piano masters who pre-date electronic recording -- Josef Hofman, Ignace Paderewski, Ignaz Friedman, Feruccio Busoni. "The de Bellis Collection," one of the most widely distributed music series, is based on selections from 22,000 recordings of Italian music collected by San Francisco businessman and cultural leader Frank V. de Bellis. The collection is housed at San Francisco State College, and Mr. de Bellis hosts the program, originating from KEBS San Diego.

The music shows are not solely instrumental. The understanding of music, especially the "new" music of contemporary composers, calls for discussion. Thus, the music "talk" show is part of educational radio today. A notable series in this vein is "Tone Roads," discussions and viewpoints on contemporary music, often from lecture series held at various universities. "Tone Roads" is produced at WUHY Philadelphia. WUHY has also given its listeners insights into the lives of famed opera singers on "Singer's World," a show matching historic recordings with biographical detail, repertory and interviews. A special WUHY program, "The Philadelphia Composer's Forum -- Past and Future," recently had a group devoted to the performance and dissemination of contemporary music explain its activities.

Boston Series on the Metropolitan Opera

One of the great musical documentaries of recent years, in any medium, has been the Boston University-produced "Hall of Song: The Met." This series of 26 documentary programs presented the history of the Metropolitan Opera Company in New York from 1883 to 1966. The broadcasts highlighted the outstanding personalities and performances which established the Met as a unique landmark of American culture. WBUR, the University station, offered the series in way of tribute to the closing of the old Metropolitan Opera House and the opening of the company's new home at Lincoln Center. Robert Merrill, Dorothy Kirsten and other major operatic stars participated in the series.

There are, of course, great differences in the amount of local talent available to the educational stations in different parts of the country. WFCR Amherst, Massachusetts, can draw upon Amherst, Mount Holyoke and Smith Colleges, plus the University of Massachusetts. WGBH Boston is centered in a great educational complex that includes Harvard, Yale and Northeastern University. From their studios go broadcasts of the Boston Symphony, New England Conservatory, Cambridge Society for Early Music, etc.

While the names of the larger colleges and orchestras might be better known, stations in smaller schools and with orchestras of less repute available still provide their listeners with excellence. WMUK Kalamazoo, operated by Western Michigan University, programs the live and taped performances of the Kalamazoo Symphony, the Junior Symphony and the Chamber Music Society.

Visiting Concerts Are Captured

Local effort, of course, does not center solely on the local music organizations. When visiting orchestras and musical groups pass through a city, their scheduled concerts are quite often recorded or carried live on the educational station. A highlight of the musical programming year on KOAC and KOAP, Oregon Educational Broadcasting stations in Corvallis and Portland, was the presentation of a concert at Oregon State University by the renowned Netherlands String Quartet.

Likewise, at WUOM, the University of Michigan station in Ann Arbor, an outstanding musical feature last year was a concert opening a week of special celebration honoring the city of Tubingen, Germany, Ann Arbor's sister city in the People-to-People program. Musical groups from both cities performed. Germany's visiting Interlochen Symphony Orchestra was featured in still another live concert broadcast. (See WUOM profile in Section IV for details of its music programming and original productions in the field of the drama).

The Drama on Educational Radio

If music is easily come by in the programming variety on the educational stations, it is not so simple to capture the other arts, drama particularly. There are fine shows -- like "BBC World Theatre," featuring dramatic presentations ranging from the works of Shakespeare to Brendan Behan, and done by professional groups that are available from standard sources via recordings. But producing drama is a highly ambitious undertaking. It is, however, being done.

At WSUI-KSUI, University of Iowa stations, Iowa City, dramatic programming is an important undergraduate effort for the University's creative writing and acting students. Both the writers and drama students work in two WSUI series, "Writers at Work" and WSUI Radio Theatre." "Writers at Work" is a two-hour Saturday morning series presenting dramatic and documentary productions written and prepared for production by UI students, and presented by the UI Radio Players. Some of the original plays: "Karma," a dramatization from a novel written by a student; "Sea and Corsica," a reading from a travelogue written by a graduate student; "Jenny Dropped the Bomb," dramatized from a short story written by another graduate student. "WSUI Radio Theatre" is a bi-weekly production, in which students present dramas, comedies, and documentaries. Length of the program varies, often running as long as three hours. Some productions are original works of students, while others are classic radio plays such as "Sorry, Wrong Number."

Apart from the drama presentations themselves, discussions of drama and the theatre are common. WAER Syracuse University, Syracuse, New York, can turn to its resident specialist as can many stations where a drama department is part of the university scheme. WAER produces "Appreciation of the Drama," featuring Dr. Gerald F. Reidenbaugh, chairman of the Drama Department, who gives weekly insights into the aesthetics of the theatre and discusses the historical background of the theatre as an art form.

Poetry Can Be Drama

At KUOW University of Washington, Seattle, a program called "Drama Perspective" presents prominent personalities discussing and illustrating aspects of the world of theatre. KUOW, in another area, also airs "Northwest Poets," a program presenting outstanding poets from the Northwest reading from and discussing their own works.

KSJR St. John's University, Collegeville, Minnesota, has begun an ambitious series called "The Performers Explore the Performing Arts" -- interviews and documentaries relating to various aspects of the performing arts. The topics have ranged from the Vivian Beaumont Theatre in Lincoln Center to the New York Ballet, from modern dance to Shakespearean drama and its effect on the modern audience.

WGBH Boston airs a half-dozen or more programs directly tied in with theatre, art and literature. Its "Tuesday Afternoon at the Theatre" presents works ranging from Ionesco's "Le Roi Se Meurt" broadcast in the original French) to excerpts from several versions of "The King and I" followed by an uninterrupted recorded performance of the original Broadway production. WGBH's series, "The Great Interpreters," has noted authorities discussing great authors and works of literature: Sir John Gielgud on Shakespeare, Emlyn Williams interpreting Dickens, etc. Heavy drama, ancient drama, new plays or old... serious music, light music, new music or old---educational radio is the fountain that is providing much of the public today with something for every segment of its diverse nature.

Youth, for instance, can take much from a widely distributed series, "Directions in Children's Literature." These programs from Riverside Radio WRVR New York, feature discussions by leading authorities on aspects of children's literature--including poetry, theater, and the teaching of reading. KWSC Washington State University, is in its 39th consecutive year with what perhaps is radio's longest established musical educational program, "The Standard School Broadcasts." The theme of the weekly broadcasts for 1966 - 67 is "The Heritage of Pan America," a musical story of the lands and people of the Americas, much of it featuring music by Latin American composers never heard on radio in the U. S.

Repeat Broadcasts

"Never heard..." That is often the vital aspect of educational programming--things worth hearing, and knowing, that would not be heard if it were not for a special kind of medium. There is also the "Re-hearing." The educational stations frequently repeat the best of their cultural fare. Last fall WGBH re-broadcast its outstanding 1958 Lowell Lecture series given by the late Harvard theologian Paul Tillich on "Man's Understanding of Literature and the Arts." The rebroadcasts were then repeated by a number of other stations.

One of the most popular of the newer cultural lecture series, WGUC Cincinnati's Elliston Lectures, produced in cooperation with the George Elliston Poetry Foundation, is on station schedules around the country. The series changes topics yearly, and most recently covered "Encounters With the New: Studies in Modernism and American Poetry."

Again, in the something-of-value-for-all philosophy, educational radio will re-broadcast the BBC's "Goon Show," zany satirical comedy by British humorists.

Returning to loftier levels, hundreds of programs and series on educational stations serve as a stimulus to listener reading and understanding. Many of the programs are similar to the KCUR, University of Missouri at Kansas City, production, "Books on My Mind." The chairman of the English Department discusses books and authors of current interest in this series. KASU, Arkansas State University, airs "College Author's Forum," featuring well-known scholar-authors discussing their writings and teachings.

Professional polish is evident in other series on literature, such as the BBC re-broadcast, "Great Novels of the World." WMUK, Western Michigan University, and a number of other stations carry "The World of Stephen Leacock," a 13-part anthology of works by the great Canadian humorist, presented by the late Canadian actor John Drainie.

Culture Has No Boundaries

Music, drama, literature make up the bulk of cultural programming -- but there are programs that cover all of these fields and delve into other areas besides. Among them is "Around the World," broadcast by WBFO State University of New York at Buffalo. This is a grouping of programs from foreign sources concerning the cultural life within various European countries. And the "Pantechnicon" series, from WGBH Boston, is an hour-long show ranging wide over a variety of artistic and literary topics, from a study of Surrealism to how Shakespeare is being directed today.

This is not a 'blue sky" culture. Most of it is real and reachable, parts of most communities discovered and examined for everyone's appreciation. There are innumerable variations in approach, even at a single station. For example, WDET Wayne State University, Detroit, in "Young America Looks at Books," has a series done for the public libraries involving panels of high school students commenting on books of their own choosing. The same station gives time to ethnic groups in the Detroit community to present their culture, backgrounds, literature and music to their neighbors.

Out of all these things come understanding, more solid perhaps a term than "cultural enrichment." And clearly, in this attempt to broadcast "understanding," the nation's educational radio stations use more than a studio turntable to get across their message.

THE NATIONAL EDUCATIONAL RADIO NETWORK (NERN)*

The National Educational Radio Network is a network which seems to defy the ordinary definition of the term. For one thing, it is not an interconnected network, but a national organization of educational radio stations which are not (with the exception of one or two state or regional networks) tied to one another electronically on a regular basis. For another, it does virtually no centralized production of network programs under its own direct auspices for broadcast by its affiliates. As might be expected, the reason NERN is not interconnected and maintains no national production center is that it has lacked the financial support to make either of these things happen.

It began in 1950 as an innovation in the mass use of tape recorded programs. Its headquarters on the campus of the University of Illinois in Urbana has, for 16 years, acted as a clearing house for the selection, mass duplication and distribution of the finest program material produced both by or for educational radio stations. Programs which are judged to meet network standards both substantively and technically are duplicated on high-speed tape-copying equipment and mailed to more than 150 affiliates of NERN.

The Network is basically self-supporting. Each affiliate pays a fee, based on such factors as station size, budget, and power. After its first five years of operation, the Network became a self-sustaining entity supported almost completely by these modest affiliate fees. On a total annual operating budget of less than $60,000, it duplicates and distributes an average of 1500 tapes per week to its member stations.

Based on current program offerings and orders from member stations, it is estimated that the Network will distribute approximately 85 million feet of tape during calendar 1967. This will provide some 35,400 hours of educational radio programming throughout the United States.

In addition, the Network provides services to commercial radio stations, campus closed circuit broadcasting organizations, libraries, schools, discussion groups, and even individuals who request tape recordings of NERN programs.

Note: These extra services are not reflected in the statistics.

Overall figures are even more revealing. In 1951, the first full year of its operation, NERN offered 458 programs for a total of 10,550 hours of broadcast time. This meant that 25,320,000 feet of tape were used to duplicate these programs for distribution. In 1966, the program figure was 1,895, with a total broadcast time of 31,371 hours, requiring 75,292,200 feet of tape. During its first 15 years of operation (through 1966), the NERN distributed a grand total of 20,370 separate programs. This has provided U.S. educational radio stations with 325,964 hours of programming. In that 15-year period, the now-ancient and always-overtaxed tape duplicating equipment at Network headquarters in Urbana processed an incredible 781,314,392 feet of magnetic tape!

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* National Educational Radio is a Division of the National Association of Educational Broadcasters

It is worth noting that the original pieces of mass duplicating equipment, purchased in the Network's first two years, are still important to the operation. Maintenance is a complex affair, since the manufacturer has long since ceased to make parts for these models. So all of the output of the National Educational Radio Network during its 16 years of existence, has been the product of overloaded and ancient equipment, a very small staff (now numbering five) and severely limited funds coming from the affiliate station fees.

NERN supplies programs to its affiliated radio stations in several different ways. First, there are its regular program offerings. These consist of programs with a wide range of content and format. Each quarter, member stations receive a long list of offerings from the Network office in Urbana, and choose from the bulletin those programs which they wish to obtain for broadcast during the forthcoming three month period. The orders are received in Urbana, and the tape is copied and dispatched accordingly on a regular weekly basis.

Such program offerings fall into seven categories; a survey of typical quarterly offerings reveals a rich and varied fare, as seen in this sampling:

Programs of Current Information and Orientation -- People Under Communism; World Population Problems...Literacy .... The Food Crisis; A Look at Congress Today; Consumer Economics; Our Prisons; Nationalism in the 20th Century; Quackery; World Law; Narcotics.

Programs About the Physical Sciences -- The Nature of the Universe; The Impact of Atomic Energy; Cerebral Palsy; Birds; The Weather; Satellites; The Upper Mantle of the Earth; The Meaning of Evolution.

Programs About the Arts and Literature -- Classic drama and literary readings -- Pride and Prejudice; the Canterbury Tales; Shakespeare; Treasure Island; Indiana Folklore; and French Theatre; Robin Hood; and the Great Books of Asia; Grammar; Swedish Arts; the Cartoon.

Programs Concerned with the Social Sciences -- American Ideals, Child

Development; The Problems of Aging; Our Jeffersonian Heritage; Woodrow Wilson's Foreign Policy; Ancient Mexico; The Great Lakes; The Dead Sea Scrolls; Woman's Role in Society; The American Cowboy; City Planning.

Programs Concerned with Mental and Physical Health -- Fear and Anxiety; The Effects of Smoking; Contemporary Psychiatry; The Nervous System.

Programs of and About Music -- The U.S. Army Band; Children's Concerts; Jazz; The Alabama String Quartet; The Musical Legacy of Ancient Israel; Modern Ballet Music; The Cincinnati Symphony; The Handel and Haydn Society; The Detroit Symphony; The United Nations 20th Anniversary Concert.

Programs for Children is the other category of the Network's regular program offerings; this may well be the only current network radio material designed specifically to reach an audience of children.

The Network also supplies its affiliates with in-school offerings. Scores of programs designed for in-school use in Kindergarten through 12th grade are available on call, and many new classroom series are distributed each year. Subject areas include science, foreign languages, guidance, language arts, music and art, safety and health, and the social studies.

Network specials are frequently offered to affiliates -- most often at no additional cost to them -- with considerable frequency. Each week, the 30-minute "Special of the Week" is produced through the Network's affiliate at the University of Michigan, and made available to all member stations. Often, this weekly special becomes the only broadcast version of an important recent address made by a national or world leader in public affairs. Other current examples of special offerings include:

A Chance to Grow -- a series of 11 programs, distributed through the cooperation of WGBH, Boston, each of which examines the way members of normal families deal with a different, critical change in their lives. The documentation is drawn from some 100 hours of recorded interviews with representative families conducted by Dr. Norman Paul, of Boston State Hospital and Tufts Medical School. The series was made possible through grants-in-aid from The Charles E. Merrill Trust, The Foundation for Education and Social Development, The Grant Foundation, Hoffman-La Roche Laboratories, and private individual donations.

The Selective Service System -- A panel discussion by participants in a conference on the selective service system held at the University of Chicago, under the auspices of the Chicago Council on Foreign Relations. Participants included: Senator Edward M. Kennedy, Professor Milton Friedman of the University of Chicago, anthropologist Margaret Mead, and Colonel

Dee Ingold, special assistant to General Louis Hershey.

The Library of Congress -- NER has entered into a special agreement with The Library of Congress which allows it to distribute certain readings and lectures given under the auspices of the Library. These programs are broadcast in their entirety, and bring to educational radio audiences throughout the country lectures and readings by the outstanding poets, critics, novelists, historians, and other men and women of letters of our time. The first program featured the Soviet poet Yevtushenko in 80 minutes of readings and commentary.

Report from Mainland China -- A series of four one-hour programs from a major conference on Mainland China held in Chicago under the auspices of the Chicago Council on Foreign Relations, Northwestern University, the University of Chicago, The Bulletin of Atomic Scientists, the American Friends Service Committee and The Johnson Foundation. The programs are designed to give Americans a wide spectrum of first-hand accounts of conditions in China today -- social, economic, political -- and the implications for U.S. foreign policy.

The sources of National Educational Radio Network programming are varied. By and large, the bulk of these programs are produced by individual affiliates of the Network, and subsequently made available for national distribution. Usually, these production costs are paid for out of local station budgets. Recently, NER has received modest grants from such organizations as The National Home Library Foundation and The Johnson Foundation to make possible partial subsidization of local costs.

However, programs come from many sources other than affiliated stations and educational institutions. In the area of international broadcasting, for example, NER cooperates with the British Broadcasting Corp. to produce a series called "Transatlantic Forum", in which prominent British and U.S. leaders discuss crucial issues via live transatlantic cable; it is broadcast to 100 countries through the worldwide English service of the BBC. BBC also produces World Report and Science Magazine in London each week, specifically for NER use, Radio Nederland also produces two programs exclusively for NER -- "Transatlantic Profile" and "European Review," both of which are received here via transatlantic cable and short-wave. "Belgium Today" is produced in that country, specifically for use by NER affiliates.

Other Network programs have come from such international sources as the University of Berne, Radio Free Asia, Italian Radio, UNESCO, Radio Sweden, the Canadian Broadcasting Company, SEATO, the Australian Broadcasting Company, the French Broadcasting System, the Israeli National Radio, UN Radio, and other international organizations.

In this country, program sources have included such diverse organizations as the Federal Security Agency, the Church Peace Union, the Air Training Command, the World Law Fund, the U.S. Army, the Eastman, Manhattan and Interlochen Schools of Music, the American Assembly, the American Medical Association, Cooper Union, the League of Women Voters, the Twentieth Century Fund, Group W - the Westinghouse Broadcasting Company, and many others. This incredibly rich variety of suppliers represents probably more completely than in any other single broadcast organization, the vastness of American culture and the potential for offering, through a single source, the best selection of radio material produced throughout the free world.

It is the dream of educational radio that there will be one day a true live inter-connected network. While commercial networking declines in scope as radio turns "local" in its market-place battle to survive the continuing television impact, educational radio struggles to literally add the world to the dimensions of its service. It looks forward to the day when it will have a national production center and be able to expand vastly the scope of its news and public affairs service.

A modest but highly significant step was taken recently, in March 1967, with the establishment of the NER Public Affairs Bureau in Washington. The Bureau's first effort is a weekly half-hour series called "The NER Washington Forum." It will cover national, international and regional subjects, many of which might otherwise be afforded scant, or no treatment by the commercial media; in a variety of formats including panel discussions, debates, interviews, Congressional hearings and documentaries, it will bring to the microphone the views and knowledge of representatives of Congress, government leaders and the intellectual community, and committee hearings. The series is conducted by William Greenwood, NER Public Affairs Director, and produced in cooperation with Station WAMU-FM, American University.

It is the conviction of the educational radio managers interviewed that as life on this planet grows ever more complex and difficult, more, rather than less, national and international broadcast coverage is needed. Full networking capability, they maintain, is an inescapable prerequisite if the medium is ever to arrive at full maturity.

Until the advent of the satellite, the obstacles -- mostly financial -- had appeared insurmountable. The satellite, with its promise of efficient and economical access to the continents, may prove to be a feasible answer.

At the present time, it is a generally accepted view in the field that a satisfactory network service could be sustained at an expenditure of only one-tenth of what would be required for television. The actual economic plight of the radio medium is sharply revealed when seen in the light of the Carnegie

Commission's statement in its report on ETV that the present yearly NET budget of $8,000,000 is insufficient to maintain the desired level of quality ETV production. One-tenth of this amount is $800,000 -- the annual budget of NER is $60,000. The distance between the need and the harsh reality is immense.

OTHER NETWORKS

Broadcasting Foundation of America

The Broadcasting Foundation of America (BFA) is a non-profit distribution organization whose objective is to make a wealth of programming services from abroad available to American radio. It represents the programming and production efforts of some 40 countries. Its programs are played by both commercial and educational stations in a ratio of two-thirds to one-third.

Last year, in the spoken word category BFA circulated about 23 weekly series and 12 one-time specials. It also distributed 19 different music festivals from abroad to American stations.

A large portion of its programs is represented by the weekly press reviews from such countries as Australia, Belgium, Great Britain, Canada, West Germany, the Netherlands, France, India, Israel, Italy, Japan and Sweden; Yugoslavia provides a bi-monthly review. In addition, the category contains an "International Science Report," an "International Business Review," and "The New Dimensions of Education." Several series are also distributed for UNESCO Radio in Paris, and about the United Nations.

An example of its music services is the 1966 French festival. This consists of 24 concerts selected from the various French festivals.

In 1965, BFA distributed some 19,606 hours of foreign produced programs. The non-profit organization produces no programs of its own.

The Eastern Educational Radio Network

The Eastern Educational Radio Network is a regional grouping of eight stations in the East: WRVR New York; WFCR Amherst, Mass.; WGBH Boston; WAMC Albany, N.Y.; WAER Syracuse; WUHY Philadelphia;

WAMU Washington D.C.; and WRFK Richmond, Va. The EERN stations provide three categories of services to one another: they exchange taped programs, cooperated in the production of shows, and interconnect live for some broadcasting.

Currently some 20 series on tape-10 hours of material-are being circulated. One of the documentaries they have cooperatively produced is about Cystic Fibrosis. Each station interviews physicians in its localities and sends the material to one station which assembles it.

While the EERN stations were interconnected for live coverage of the Fulbright Hearings in 1965, it has not been economically feasible to continue this live networking on a regular basis. According to Al Hulsen, manager of WFRC Amherst, and head of EERN, the level of interest among the EERN stations for live networking is very high, the technical capability is there, and all that is lacking is funding for interconnection. He states that the eight stations were interconnected on a regular basis during the early 1960's as the Educational Radio Network (ERN).

The staions presented many live inter-city series and were particularly successful for their in-depth live coverage of the Cuban Missile Crisis in 1962. The ERN stopped broadcasting as a regular live network when the necessary foundation funding was no longer available.

Several EERN stations are planning a joint discussion of such regional problems as water pollution and recreation through a combination of broadcasting and phone lines.

The station group also pools its resources to buy programs from outside suppliers.

The Intercollegiate Broadcasting System

Formed in 1940 to provide a wide range of services to its college member stations (primarily student operations) the Intercollegiate Broadcasting System (IBS) claims to represent "All phases of campus broadcasting." It has provided services for 58 licensed FM--only stations, one AM--only station, 212 carrier--current (closed circuit) operations, included are 18 combined AM and FM outlets which combine AM carrier current and FM simulcast.

The taped program service consists of about four and 3/4 hours of material per week, ranging in program length from five minutes to an hour and one half in length. Some of this represents a redistribution of British and Canadian Broadcasting Corporation material. The balance comes from participating stations. The IBS also offers sales and promotion advice, a master handbook, a magazine published six times each year, consulting services and FCC representation.

TOTAL PROGRAM OFFERINGS OF NATIONAL EDUCATIONAL RADIO 1951-1966

	No. of Programs	Total Time Series	Total Air Time	Feet Dubbed
PRE 1951 AND 1951 TOTAL	458	317:45	10550:00	25,320,000
1952 TOTAL	566	268:30	11030:45	26,473,800
1953 TOTAL	890	459:00	20274:15	48,658,200
1954 TOTAL	781	390:39	15476:04	37,142,400
1955 TOTAL	1085	523:50	19023:35	45,656,400
1956 TOTAL	1141	532:28	17500:16	42,000,600
1957 TOTAL	1371	581:40	17664:50	42,396,000
1958 TOTAL	1402	603:20	18545:40	43,509,800
1959 TOTAL	1430	620:20	20049:30	48,118,800
1960 TOTAL	1374	632:00	22886:25	54,927,600
1961 TOTAL	1349	579:10	23821:00	57,170,400
1962 TOTAL	1510	552:35	21942:15	52,661,400
1963 TOTAL	1658	600:55	24693:20	59,263,992
1964 TOTAL	1660	620:10	24396:30	58,551,600

TOTAL PROGRAM OFFERINGS OF NATIONAL EDUCATIONAL RADIO 1951-1966 (cont'd)

	No. of Programs	Total Time Series	Total Air Time	Feet Dubbed
1965 TOTAL	1800	674:40	26738:00	64, 171, 200
1966 TOTAL	1895	745:10	31371:45	75, 292, 200
GRAND TOTAL THROUGH 1966	20, 370	8702:02	325, 964:10	781, 314, 392
(In-School Subtotal)	(3, 679)	(919:20)	(18, 948:15)	(45, 475, 800)
(Special Programs Subtotal)	(972)	(551:18)	(26, 933:05)	(64, 639, 200)

PROFESSIONAL COMMUNICATIONS

The use of educational radio by special groups to reach special groups is a story never fully appreciated by either broadcasters or educators. For one thing, such services offer highly-specialized information to professional audiences; their users are few in number, though members of key professions. For another, this unusual service has been given little publicity and little is known about it. Despite this, there are numerous reasons for its great success, and other compelling reasons for an expanded role for similar services in the face of advances in instructional and close-circuit television and videotape records.

These reasons include cost (which relative to television is miniscule). unique two-way audio systems that allow for exchange between the sender and the receiver of instruction, and the imaginative use of may audio-visual aids (charts, slides, X-Rays) to amplify the spoken word.

What follows are descriptions of several educational operations that have used FM radio alone or in conjunction with telephone lines to impart specialized knowledge.

The largest of these operations began in 1955 modestly to fill a critical need: to help the medical profession keep pace with the numerous advances in medicine. As one observer noted: "Instead of suffering from a lack of progress, medical education suffers because of it." Although medical colleges continue to expand their postgraduate courses in attempts to reach the practicing physician, attendance generally is low. The major reason for this, showed a special study conducted by the Council on Medical Education and Hospitals of the American Medical Association, was simply that physicians could not leave their patients to go back to school. And for those practicing near postgraduate medical centers, the courses usually were given at unsuitable times.

Program Began In 1955

It was with this background--the pressing need to bring advances in medical knowledge to the doctor and ultimately to his patient--that the Albany Medical College of Union University, New York, began to use two-way radio communication for postgraduate medical education in 1955. It was to be a "university without walls" and was to become what is probably the largest postgraduate classroom in the world. The Albany Medical College owns and operates WAMC-FM, which, with its transmitter located on top of Mt. Greylock in Adams, Mass., has a tremendous reach. "At the present time," says station manager Albert P. Fredette, "we have the second-largest coverage of any FM station in the northeastern part of the United States, commercial or non-commercial.

(The medical school began its postgraduate programming with one-hour programs made up of 15- or 20-minute lectures by members of the medical faculty. They were broadcast to six hospitals within a 50-mile radius of Albany. Questions from the six hospitals were received via radio, at first on the amateur band. The receiving as well as the transmitting in the participating hospitals was handled by volunteer amateur radio operators.)

Five Times As Many Students

Response of the participants was enthusiastic; and additional hospitals were added. Writing in the Journal of Medical Education, Arthur Ebbert, Jr., M. D., an associate dean and assistant professor of medicine at Yale University School of Medicine, said that after two years it was noted that "the two-way radio conferences had provided postgraduate instruction to five times as many individual physicians as had been attracted to the intramural postgraduate presentations at the Albany Medical College during the same period... with less effort on the part of the faculty."

These results were so encouraging that the Albany Medical College began operation of WAMC in 1958. FM tuners and remote broadcast pickup transmitters directed back at the station's transmitter were installed in participating hospitals. Thus, there was free two-way communication between the College and the hospital.

For the participating physician, it was a relatively simple matter to join his colleagues at his community hospital, at a given time, to hear the latest about arteriosclerosis. He was permitted to ask questions, as were doctors from other communities participating in the discussion. As the lecturers were speaking, slides were projected to give a visual dimension to the information.

Signal To The Source

If the participating doctor has a question, he writes it on a card and passes it to the hospital moderator, who simply presses a button on the front part of the transmitter. The moderator, at the other end, the Medical College, then knows that someone within the network of hospitals involved wishes to ask a question, or make a comment. These questions are heard throughout the network, as are the answers. The situation therefore approximates the classical setting of the classroom. Moreover, since the questioner is not identified, he is freer to ask what he wishes and has an advantage over being in a classroom setting.

The year 1958 was an important one in the growth of postgraduate medical teaching. Faculty of medical schools in other areas of the northeast were invited to participate in WAMC's two-way radio conferences. Transmitters in Boston, Burlington, Vt., and New Haven allowed for the origination of programs in those cities. They also made it possible for the faculties of the medical schools of Boston University, Harvard and Tufts, University of Vermont and Yale to participate. Since then, programs have been originated from as far away as Columbus, Ohio. Numerous other cities and schools have joined from distant Pittsburgh and Philadelphia to relatively near Syracuse. Often, the point of origin was connected with the WAMC network by telephone (a practice to be examined later in exploring the Ohio State University Radio-Telephone Education Network).

Three years after WAMC got started, the University of North Carolina School of Medicine initiated a number of two-way radio conferences involving groups of physicians within the radius of the transmitter of the University's station, WUNC, Chapel Hill. In 1962 a similar program was begun at the Ohio State University College of Medicine with one important difference, questions from student-physicians went to the studio via telephone.

A linking up of the existing two-way radio networks was achieved in 1962 at the annual meeting of the American College of Physicians in Philadelphia. Albany, N. Y., Chapel Hill, N. C., and Philadelphia, with the help of the Educational Radio Network (linking eight Northeastern stations), were joined to broadcast a conference on urinary tract infections. (Questions from Chapel Hill and Dayton, Ohio, were asked by telephone.)

Growth Record: 60 Hospitals

At Albany, where everything began, things have grown to a point where 60 hospitals located throughout seven states in the Northeastern part of the United States now participate, reports WAMC's manager. In the current academic year, says Mr. Fredette, "we'll draw a faculty from 20 medical schools, located as far west as the University of Wisconsin, as far south as North Carolina, the three schools in Boston, and so on."

What does the practicing physician learn? He receives information on the latest methods in diagnosis and treatment from expert practitioners in the field. Thus he has authorities available to elaborate on specific medical problems which trouble him. He may also hear a physician in another community pursue the subject that interests him further.

When hospitals who wish this service come to Albany, they are asked to accept certain criteria: that they continue the program for a minimum of three years, and that they contribute a "token sum" to the Albany Medical College for postgraduate medicine. In return, the college installs and maintains all equipment. "As of this date," says Mr. Fredette, "the contributions from the participating hospitals account for just under 50% of our operation. We generate the balance from grants and aids from foundations, government agencies and so on."

Proof of Effectiveness

We find this service to be very effective. It saves the valuable time of practicing physicians and of the staff of medical colleges. The Albany Medical College has noted, "If the physicians who actually attended the conference during the 1964-1965 season had to come to the medical colleges from which these conferences originated, their composite travel distance would have been in excess of six million miles."

Physicians now depend on receiving advance medical information from medical journals, from pharmaceutical firms, and from government sources. Of these three, the government tends to be slow and non-committal, while pharmaceutical firms tend to be quick and definitely committed, but much of their material is promotional, not professional education.

The Idea Spreads

Meanwhile, electronic postgraduate education began to spread. Licensed by Ohio State University, WOSU-FM, Columbus, Ohio, in 1962 originated a program from the Albany Medical College. This program in part experimental, led to the conclusion that WOSU would best operate by combining broadcast and phone line facilities.

From that beginning grew the Ohio Medical Education Network. The network now serves a four-state area with 105 programs broadcast over the facilities of a dozen FM stations. Between 50 and 60 hospitals in Ohio, Pennsylvania, Kentucky and West Virginia assemble community physicians to hear the special courses. During the present year the number of hospital medical staffs that have participated will number 70, while the five-year registered attendance total will exceed 50,000. (This figure excludes physicians who listen in their offices, homes or automobiles.)

Others Participate

The two-way radio instructional system has not been limited to doctors only. Veterinarians, nurses and teachers have also benefited. According to William Steis, manager of WOSU, an entirely new program for veterinarians was started in January in eight central locations so that professionals within a 20- or 30-mile radius of a center can attend. Now in the planning stage is a program that would reach various groups of state employees. Also in need of being developed, according to Mr. Steis, are series of programs that would be done in association with sociologists, political scientists, psychologists. The only boundaries of two-way educational radio conversations are "the boundaries of your own imagination," he says. Teachers of retarded children, and even their parents, could participate in weekly seminars. So could workers in the problems of ethnic groups in the big cities.

Recognizing the need for in-service educational programs for elementary and secondary school teachers because of abrupt changes in techniques and actual information, the Ohio State Radio-Telephone operation began a series of broadcasts dealing with problems that concern teachers throughout the state.

Teachers Have Similar Problems

As with the medical profession, the problems in reaching teachers are related to distance and available time. In the WOSU approach, teachers themselves can select topics and can have a 40-minute period to ask questions--a procedure not likely in the normal college classroom. At last report Ohio State was operating a radio-telephone program for nearly 6,000 teachers and administrators serving better than 230 schools.

The concept of two-way radio education has definitely caught on in the medical field. On the West Coast, the University of California's San Francisco Medical Center uses the facilities of the Berkeley Pacifica station, KPFA, and of KXQR-FM Fresno. In Utah, the Medical School of the University of Utah has linked seven hospitals into postgraduate education through KUER Salt Lake City, of which it is the licensee. In the South, WUNC Chapel Hill is an origination point for medical training which uses hospitals in that area. The University of Wisconsin uses telephone lines for two-way postgraduate medical training in X-Ray technology, veterinary science, pharmacy, nursing and hospital administration. This service has grown from 19 hospitals and medical centers in 1965 to 84 hospitals in 1966. Tapes are also distributed to professionals made by WHA Madison the flagship station of the Wisconsin State Network.

Obviously, this use of FM radio makes it possible for the working professional to keep abreast of developments in his field. It has proved that time and distance are no longer obstacles to a continuing, perhaps never-ending, educational process.

All Around The World

Illustrative of the fact that time and distance are easily overcome, the WAMC Albany operation has arranged three two-way international conferences between it and Australia. The first medical conference between Albany and Sydney took place on October 14, 1965. The subject was "New Developments in the Mechanisms and Therapy of Cardiac Arrhythmias." Originating in the studios of WAMC, further broadcast was made possible by domestic long-distance telephone lines and the Compac Trans-Pacific cable between Oakland, Calif., and Sydney.

In Sydney, three-point participation was established through a conference-call system that allowed telephone circuits to be connected in round-robin fashion while amplifiers and speakers brought in group participations at various points in Australia. The conference was recorded and transmitted later over open-circuit by radio station VL2UV so that the maximum number of Australian physicians could be reached.

Because the costs are relatively low, the further development of two-way radio education could have world-wide implications, speeding up the learning process in such under-developed areas as sections of Africa, where professionals are truly isolated and sometimes are years behind important discoveries in their fields.

NON-BROADCAST SERVICES

At this time, an area of largely neglected opportunity for educational radio is the furnishing of non-broadcast services. The educational radio station, after all, when properly staffed and funded, is a vast aural production center where a multitude of public information and materials can be generated. Yet much more is possible. A station can reach out and provide non-broadcast services for professionals, for groups and for students--services which can be listened to in the privacy of the home, in class, in meetings, etc.

Some of this is being done. Yet in all too many cases, only the barest beginnings have been made. The University of Wisconsin has started, on a modest scale to exploit its production facilities in this manner. It has created a series of 88 five-minute medical recordings on material of interest to physicians. Called "Telephone Dial Access," it is an advisory service for the medical profession. It permits doctors to solicit medical advice via telephone when they are in doubt about a variety of subjects such as:

> "Congestive Heart Failure in Infants," Marriage on the Rocks," "Therapy Control in Advanced Breast Cancer," "Management of D.T's," and "Acute Crush Chest Injury."

Students Can Replay Lectures

The University is also recording lectures given by teachers for replay by the students. Department of Psychology lectures are stored in archives, and Department of Zoology lectures are used in audio tutorial laboratories. Lectures delivered in the School of Nursing are sent to nurses for home study so they can improve their skills.

Much of this material has use far beyond the bounds of the immediate campus. The University is working on a project to make many of these recorded lectures available to Negro Colleges in the South, as a supplement to their educational courses of study. It has already sent tapes of many of its "Wisconsin School of the Air" programs to the Northern Nigeria Education Project. These are used by the children of teachers sent to the project by the University, and, some, undoubtedly, are used by Nigerian children themselves, though not on the scale possible if more equipment were available.

Public school systems with in-school broadcasting also provide tapes for teachers to play back in class. This is true of WNYE New York City, KANH Albuquerque and many other in-school stations. In too many cases, however, sufficient quantities of tapes are not available for all the class-rooms that would like them.

The National Tape Repository (NTR) a joint venture of NAEB and the Department of Audio - Visual Instruction (DAVI) of the National Education Association, provides instructional tapes for use in classrooms and other related non-broadcast uses. Again, lack of adequate financing has thus far inhibited its potential for the broadest possible service to American education.

Tapes of educational radio programs can be used for a wide variety of purposes. Yet to be developed is a comprehensive service which properly financed would provide community organizations with copies of tapes of programs on important issues in which they are interested. The material on these tapes could act as a further stimulus to discussion. This kind of added dimension of service is not possible generally at the present time; given the limited financial base of the medium. Within its current limitations, the NER Network does offer much of its taped programming to interested educational users on a non-broadcast basis, but it is admittedly only a beginning.

SERVICE TO COMMERCIAL STATIONS

A little-known but significant service rendered by educational radio is the free distribution of many of its programs to commercial stations throughout the country. Either the educational station makes available tape duplicates of programs it has produced, or it produces specific public-service programs at the request of commercial stations.

Educational stations performing this service include, among many: KSAC Manhattan, Kans.; WUOM Ann Arbor; WDET Detroit; WKAR East Lansing; WMUK Kalamazoo; WOI Ames, Ia.; WSIU Carbondale, Ill,; WBAA Lafayette, Ind.: the Wisconson State Network; WDUQ Pittsburgh; WGUC Cincinnati; WBOE Cleveland; WUOW Seattle, and KSWC Pullman, Washington.

The scope of this service, of course, varies. Several stations distribute their programs to almost 100 outlets each, or even more. At the other end of the scale, some reach only a handful of commercial stations. Two illustrations indicate the possibilities of such services:

> WUOM's programs are used by 111 of the 118 commercial stations in Michigan. The public-service broadcasts of KSAC's taped network reach 95 per cent of all Kansas homes through the use of commercial stations.

The implications of this service are worth considering. For one thing, it proves that the audience reach of educational radio, at least in the case of some programs, is far greater than anyone had ever thought possible. For another, it shows that educational radio stations can become a vast chain of miniature production centers for public radio, the commercial widespread distribution can add a new dimension to educational radio, giving it an unparalled reach into the homes and hearts of America.

Commercial Use Increasing

This is not to say that the programs furnished by educational stations are played during peak listening hours on commercial stations. Many are broadcast in late evening and early morning, many may be nothing more than "filler," a free way for commercial stations to get the public service materials they need to comply with their Federal Communications Commission requirements as licensees. Yet a large number of these programs are given important listening positions on commercial radio.

Regardless, since many commercial stations do not have the economic base to produce elaborate public service programs, in the future more millions of listeners can be expected to be added to the total audience of educational radio. The degree of success, however, depends upon a continuing improvement of program quality, and upon fuller utilization of the programming resources of educational radio.

The programs furnished to commercial stations by educational radio vary. The KSAC Network offer more than a dozen shows. Here are some titles:

> "Rural America" . . . "Report on Agriculture" . . .
> "Kansas Afield" . . . "Children Are People" . . .
> "Homemaking Tips" . . . "Investments."

Another station, WSIU Carbondale, offers a different kind of program:

> "Forum of Unpopular Notions" . . . "Negro Music in America" . . . "Page Two News Analysis" . . . "Business Bulletin"

WUOM Michigan includes among its available presentations:

> "Conservation Report," "Medical Report," "RX For Health" and 21 others, including many specials.

A service of smaller dimension is that rendered by WGUC Cincinnati. For many years it has been a programming resource for the commercial stations of its city. They decide what programs they want and the station produces them. Four such programs are now being created. Three are music programs expressly created to take advantage of the faculty and students of the Music Department of the University of Cincinnati, the station owner. The other program is "Science in Everyday Life." Another of the WGUC programs heard on Cincinnati stations was "Adventure in America," which painted aural portraits of such legendary figures as Annie Oakley, Mike Fink, Johnny Appleseed and Paul Bunyan.

One Program For One Station

On a smaller scale, WBOE Cleveland has been furnishing "Project Learning" to WJMO in that city. This public service series acquaints listeners with adult education, child development and the School Neighborhood Corps.

While the concept of extending the service of educational radio through commercial channels is an exciting one, as yet it is limited in scope. The usual problems remain: most stations do not have sufficient funds and personnel to produce programs for themselves, let alone for others. But even many stations with programming to offer do not have the money to buy reels of tape or the equipment to duplicate programs. A great new public for educational radio waits the solution of such problems.

THE NEW FRONTIERS
OF
EDUCATIONAL RADIO

THE EXPANDING RANGE OF EDUCATIONAL RADIO SERVICE

The air is full of proposals for educational radio. Some are on the verge of fulfillment, some are in the planning stage; others -- the majority -- are dependent upon money and/or improved facilities. Plans cover the broadest kinds of needs. They are:

Professional Services: for doctors, nurses, veterinarians, lawyers, pharmacists: for local and state employees of agencies (welfare, highway, county agents): for farmers.

The Disadvantaged: the elderly, the chronically ill, the poor, the migrants, the retarded, the ethnic and racial minorities.

The Socially Ill: Juvenile delinquents, criminals, drug addicts, alcoholics.

Instruction: for students on branch campuses, for adults, for those taking post-graduate education leading toward degrees.

To illustrate, WBOE Cleveland, the in-school station,hopes to widen considerably the range of its services to its community. It lists the following among proposed public services:

(1) a weekly school newspaper, (2) special broadcasts of speeches given in the community by outstanding authorities in various fields, (3) daily broadcasts of national and local news, (4) five-minute talks on young people's health problems, (5) discussions on alcholism and drug addiction by psychiatrists and physicians, (6) a series on personal adjustment by the school system's psychiatrist, featuring dramatizations and interviews, (7) a program on the Cleveland Play House spring Shakespeare Festival production of "The Tempest," (8) interviews with local physicians and scientists on current developments in medicine, (9) three programs on books and censorship, and (10) interviews with executives from industry for vocational planning classes.

WIAN, another in-school station, in Indianapolis, would like to create a "Want Ad Job Center of The Air" for young people. And, in cooperation with its Board of Education Extended School Service, WFBE Flint, Michigan plans to offer adult education on its in-school station.

WBUR Boston is building closer ties with the Metro Center set up by Boston University, the station licensee. Its first project is to further adult education. A counselor has been hired who spends half his time developing a new and truly unique program which will actually offer counseling over the air. The adult, in a recreated interview, will explain his problems and his past and be given advice as to how to continue his education. Extensive publicity and promotion will be given the program.

KUOW Seattle is expanding its community service greatly with more attention planned for fair housing, employment opportunities, minority groups, air and water pollution, transportation, police methods and problems and consumer protection, and ethical and unethical business practices. The University of Washington, the station licensee, is opening one of the best staffed Mental Retardation Centers in the nation. KUOW will soon be doing regular programming from the facility. It is also working on a new series for the elderly in cooperation with the Medical School's Division of Geriatrics.

Encouraging Hiring Of The Poor

WOUB Athens, Ohio, is preparing a series for Ohio University's Center for Economic Opportunities, which encourages industry to hire people from the poorer economic areas. The station is also talking to the University's Institute for Regional Development about a series. This group's function is to study a community's needs and make recommendations. It might find, for example, that a school system is not making the progress it should or is not developing its potential in attracting new industry.

KSAC, Manhattan, Kansas still hopes to get the funds to do a series on the rehabilitation of the young criminal. The station feels that Kansas is uniquely situated for such an effort with the Menninger Foundation there, as well as headquarters for the Seventh Step, an organization of ex-convicts sometimes referred to as "Convicts Anonymous."

KUAC College, Alaska, is planning a program on homemaking for the bush country. Topics will include the preparation of fish for canning and skinning and preserving wild game. The station points out that while bush families depend on such procedures for survival, current practices are inefficient and unsanitary.

To assist the growing number of Puerto Ricans in the Milwaukee area, the Wisconsin State Network has begun to teach English to the Spanish-speaking population.

Recently, WPLN Nashville was unable to get funds for a major project which sought to educate illiterates. It involved teams of specialists working closely with those in need of such education. Despite this setback, the station is considering the presentation of a series dealing with illiteracy.

Reaching The Illiterates In Washington, D.C.

More success greeted a proposal by WAMU Washington, D.C. The station was able to get funds under Title III of the Elementary and Secondary Education Act (ESEA) to reach approximately three percent of the children entering the Washington schools from culturally disadvantaged, low socio-economic communities. The project, "Enrichment Through Radio," will reach elementary and secondary students, and elementary classroom teachers and language arts and English teachers at the elementary and secondary school levels. It is aimed at counteracting language deficiency and will include experimentation to determine the best possible combination of techniques, media and programs in the language arts.

Still undecided is the fate of another Title III ESEA project which would use, to some degree, the facilities and expertise of KANH Albuquerque. The public school system, which is the licensee of KANH, has applied for a grant of $168,000 to find out "Why Johnny Can't Read." Thirty-three percent of the school population speaks native Spanish and 10 percent various Indian dialects. Were the grant to be made, the radio station would figure prominently; it would present bi-lingual programming.

The extension of education to an entire region is being discussed by KOAC Corvallis, Oregon, and the Northwest Regional Laboratory which serves Oregon, Washington, Idaho, Montana and Alaska. The KOAC broadcasts would be syndicated throughout the other four states.

The Spanish-Speaking Illiterates in Florida

An even more ambitious plan, designed to provide a voice for the disadvantaged is that of the Palm Beach County School System in Florida. The plan is to build an FM station to serve the Spanish-speaking migrant workers of Southern Florida. Located at the Hagen Road Elementary School in Delray Beach, it would be for the exclusive use of migrants' children.

This broadcasting project is seen as a pilot program for solving certain communication problems, such as (1) communication with persons unable to read or write in any language, or to talk in a language common to the community as a whole in a way to make their needs or desires known and

and understood; (2) communication with persons in widely dispersed areas and isolated homes and (3) communication with persons who have behavior patterns and attitudes alien to the community, but whose behavior and attitudes in many respects contribute to a warm and close family life.

For a variety of reasons, migrants often do not encourage their children to go to school. Hence, the station would seek the family's aid from the infancy stage and would involve parents in the school and its program.

The school site will contain both radio tower and studio. Receivers of a fixed frequency will be placed in individual apartments or houses of about 300 selected migrant families.

Broadcasts will be in English and Spanish. Some of the programs would be pre-recorded during the school day and then broadcast at night. These are expected to help motivate the student in writing, speaking and reading. Programs anticipated for adults include conversational English and Spanish, household hints for cooking, baby care, food prices, news of rummage sales, programs on health, farm labor news, weather as it affects the worker, work availability news, and local and world news all delivered in simple language.

The Negro Station Project in St. Louis

An unusual anti-poverty effort involves a plan for an FM educational station in St. Louis specifically directed to the lowest Negro income levels. An application for the station was filed with the FCC in late 1966 by the St. Louis Educational Assistance Fund. This is an outgrowth of a fund set up by a commercial radio station in St. Louis, KATZ, which has offered to pay for constructing station facilities, staffing and clerical help. The new outlet would use KATZ's studios and offices until it receives enough financial support from other sources.

The Fund would develop, among other programs, a station service designed in collaboration with the Boards of Education of St. Louis and East St. Louis to meet the needs of elementary and secondary schools with a preponderance of Negroes. Such programs, it is said, must "touch the inner springs of understanding of the Negro pupil." The Fund believes its proposed facility must follow the pupil from the classroom into the home, stand at the pupil's shoulder, and provide assistance he may not otherwise get.

One service envisioned is a "Homework Clinic," offered Sunday through Friday nights. The exact form of this tutoring is being studied. One proposal is to accept homework problems by mail or phone, select those which appear most common and generalize from the particular problem to deepen understanding of the subject as a whole. Another would invite high school students to assist with the answer by telephone. A variation of this plan provides for a panel of students to be on hand at the station.

As with the Delray Beach station, the St. Louis operation would help its audience develop a pride in their heritage. One way is coverage "of the ever-increasing presence of the American Negro in the arts." The station would broadcast news of such developments, talks by successful musicians, writers, etc., and performance of music and serious writing. Also, there would be broadcasts of authentic folk music, the source of music popular with both Negroes and Whites today.

The station intends to work closely with anti-poverty efforts in its area. As a matter of fact, it would like to make itself the established voice of anti-poverty agencies operating in St. Louis-East St. Louis. For example, it's proposed that a daily calendar of OEO activities be broadcast.

As of this writing, the project has been temporarily halted because of the difficulty of resolving the long-range financing problems.

A project still in the exploratory stage is an educational radio station for Watts, the Negro district of Los Angeles which sparked into flame recently. It would become a communication center for the community. So far, despite the interest the idea has aroused in several influential quarters, nothing concrete has emerged. It is one of the most potentially significant ideas about the new uses of radio this study has uncovered.

Instructional Radio

There is considerable ferment in instructional radio. One development that may bear watching involves the joining together for production purposes. An example of one such venture is the combination of WCYS Yorktown and WCWM Williamsburg, both in Virginia.

At the level of higher education, KUMD Duluth has broad FM plans contingent on a power increase. These fall into three categories: (1) courses by the University of Minnesota for credit and non-credit, (2) enrichment programs and (3) special programs. Credit courses might be taped or delivered live. Participating students would be tested and trained by faculty members working through the extension division. Non-credit courses would be mostly of the how-to-do-it variety. Enrichment programs would include lectures, convocations, recitals and plays. Dubbed the "ice cream" of the schedule, the special programs would be "unique shows resembling television network specials." An example would be a documentary dealing with economic growth of the area since the discovery of taconite.

The Educational Systems Approach

There is a growing tendency among radio practitioners to think of themselves as communicators rather than as media specialists and to see radio as one part of a multi-media approach to education. More and more, one hears that the time has come to move away from the tunnel vision that causes people to deal with television *or* radio *or* programmed instruction *or* computers *or*, for that matter, the textbook. The educational system design, it is argued, should permit the use of the technology and techniques appropriate to the task and should not be arbitrarily limited to any single resource.

According to John P. Witherspoon, former director of The Educational Communications System project and currently manager of KEBS San Diego State College: "The inclusion of these other media do not make an educational communication system unnecessarily expensive. On the contrary, at slight additional expense, the system becomes enormously more flexible. With a good research and development program, and with some discipline against the use of television or other high cost media when other approaches can do the job as well or better, money can be saved over the life of the system while its educational performance is improved. Some examples are:

> "1. The Iowa mathematics project is one example of telephone techniques plus the electrowriter for the transmission of handwritten equations, formulas, notes, etc. When the task requires only voice plus 'blackboard' notations, this technique offers real promise. It is very inexpensive, and its transmission demands only the equivalent of two voice grade telephone circuits: one for the lecture and one for the writing. There is no theoretical reason why FM stations properly equipped for multiplexing cannot transmit the blackboard as well as the audio signal.
>
> "2. There are several speakerphone techniques which would allow students to join seminars which take place at remote campuses. The familiar Stephens College experiments provide one example. These techniques may be a more practicable variation of some small school 'travelling scholar' programs, which have sometimes found that scholars are not as portable as they used to be. Quality may be improved, and costs reduced, by using radio except during interaction.
>
> "3. The enormous recent development of language laboratories once again calls attention to the virtues of audio-only systems.

"4. Research remains to be done on one of the most promising fields, the combination of slow-scan television and high quality audio. Slow-scan, still-picture television with reasonably high transmission rates and accompanied by a good sound track, provides the television equivalent of a slide presentation. It is likely that at least half of the instructional television production now underway could be done better with the simple combination of audio and still pictures, which would force attention on the subject matter and remove the temptation to take the easy way out by using an expensive television system to watch a lecturer talk. This system would also be much less expensive than conventional television. The slow-scan concept is a somewhat more sophisticated version of the one used by Albany Medical College and its station WAMC, which is described more fully elsewhere in this report. During a WAMC radio lecture, physicians gather in hospitals to watch a synchronized slide presentation. When technical development is complete, it will be possible to transmit the slide presentation as well as the radio signal.

"5. As we begin to apply computer technology to a wider variety of education tasks, new media combinations will become possible. For example, it may be possible to attack the broadcasters' old problem, the lack of immediate feedback. Already at the conversation stage are projects which would make use of the broad dissemination powers of broadcast stations coupled with feedback to computer centers, probably via push-button telephone dialing systems. Staff members of AT&T and researchers of, for example, San Diego State College, are at work on this idea."

Multiplexing

Perhaps the most important technological development in radio education is multiplexing, which has opened up almost endless possibilities for service to small, specialized audiences. Indeed, if the hopes of educational broadcasters are realized, side-band broadcasts will penetrate into every aspect of modern life.

Multiplexing permits one or more signals (sub-carrier) to be carried "piggy back" on main channel transmission. It is not a new device but has had a long and useful history in telephony and extensive military utilization in situations where simultaneous multiple transmission is needed.

Its widest and best-known use in broadcasting has been in stereo transmission. Most recently it has been used as a device to provide additional private point-to-point communications capacity for educational and commercial broadcasters. "Storecasting,: or the Muzak-type background music operation, are well-known commercial uses. The multiplex signal can be received only by a special multiplex receiver or adapter (the adapter as distinguished from the receiver uses the tuning circuits of an FM receiver and its power amplifier) tuned to one of several frequencies permitted under Subsidiary Communications Authorization from the Federal Communications Commission.

Stations With SCA's

At the present time, only fifteen educational stations in the United States hold the necessary SCA (Subsidiary Communications Authorization). They are: KXKX San Francisco Theological Seminary; KPFK Pacifica Radio, Los Angeles; WFSU, Florida State University, Tallahassee; WAMC Albany Medical College, New York; WFCR University of Massachusetts, Amherst, Mass.; KCUR, University of Missouri, Kansas City, Mo.; WUNC Chapel Hill, North Carolina; and the following eight, all of which are members of the Wisconsin State Radio Council: WHSA Brule; WHMR Wausau; WHLA Holmen; WHKW Chilton; WHHI Highland; WHAD Delafield; WHA Madison; and WHWC Colfax.

Although they do not yet have SCA authorization, many educational broadcasters are going ahead with plans to use multiplexing. WSIU Carbondale, Illinois, is considering calling a multiplexing conference in its area to consist of about 100 people representing the state, federal agencies, the local government and important civic figures. Its objective would be to define the three or four greatest needs which multiplexing could serve in the area covered by the station.

The Pacifica Foundation stations--KPFA Berkeley; KPFK Los Angeles and WBAI New York City all have detailed multiplexing plans and have SCA authorization. These include adult education, college level courses and professional refresher seminars. The Berkeley station is already a major link in the medical conferences for doctors and nurses presented in 50 hospitals in the San Francisco and Fresno areas, and the University of California has indicated its interest in extending these and other services throughout the state by linking the UC branch campuses. Side-band transmission would permit a great expansion of service to include pharmaceutical and medical lectures, nursing instruction, seminars in surgery and veterinary medicine, etc.

An Elaborate Plan For Multiplexing

One of the most detailed and extensive programming plans has been prepared by KUSD (AM), operated by the University of South Dakota. This encompasses both educational TV and FM multiplexing networks. A rundown of some of the proposed services suggests the wide scope of services that multiplexing makes possible.

The University's own departments would provide service to parents of retarded children, physicians, laboratory technicians, public school teachers, lawyers, businessmen, municipal government officials, nurses, social workers, and athletic contest officials. Program services from outside statewide groups would involve the South Dakota Society of CPS's, the Alcohol-Narcotics Education Association, three major veterans associations, the Association of Assessing Officers, bankers association, Bar Association, Association of the Blind, the state division of the American Cancer Society, dental association, Volunteer Firemen's Association, the state historical society, the Fair and Exposition Association, two sheriff's associations, and so on.

At KSAC Manhattan, Kansas, the service would take into heavy account the economic needs of the area. Multiplexing would be used to continue the education of veterinarians (Kansas State College, the licensee has a veterinary school of medicine) and would also seek to serve feed and seed dealers. Because feed lots are springing up all over Kansas, the station feels livestock interests could also benefit from a specialized programming service.

But the pressures for improving the quality and quantity of education also enter the picture. The station would program for the state's junior colleges growing up as a feeder system to the major universities, which cannot handle the great influx of students. Because some of the technical/vocational schools in the state do not have enough competent teachers, the station feels it could fill a gap. Similarly, the state still has many elementary and secondary schools which are small, understaffed and underequipped and which could benefit from a multiplex service. Teacher training is also proposed.

One of the more important medical services now being offered--the Albany Medical Network through WAMC Albany, N. Y. --would like to extend its range considerably through side-band broadcasting. It already beams medical instruction to 60 hospitals in a 100, 000 square mile area covering the eastern third of New York State, metropolitan New York, northern New Jersey and the New England states (see Section V on Professional Communications for details). It intends to make similar services available to no less than 43 professions allied with medicine, including nursing, anaesthesiology, veterinary science, rehabilitation, etc.

Extension of this concept of postgraduate training to other professions, such as law, is also proposed and the station has conferred with the New York State Bar Association in this connection.

Plans for Kansas

Like many educational broadcasters, the plans for KCUR Kansas City, Missouri, depend on allocation and power decision by the Federal Communications Commission. As an example of how stations hope to divide their main and side channel services, KCUR would program as follows:

On the main channel it proposes programs which "will give cultural and intellectual enrichment to all those within reach of a (network) member station signal." Examples are lectures by distinguished visitors to the various campuses of the University of Missouri and four state colleges, adult and continuing education courses, perhaps college-level credit courses for those unable to attend classes, symphony concerts, prose and poetry readings, etc.

On two side channels there would be short and refresher courses, seminars for professional schools and organizations (primarily medicine and law), language drills, lecture repeats and extension courses. There would also be programs for the less fortunate--not only the economically disadvantaged but prison inmates and hospital patients. The former would be aided by services supplementing VISTA and UPWARD BOUND, which would be transmitted to listening centers in poverty-stricken areas. Another possible use is the creation of material for training enrollees in the Peace Corps, Job Corps and other such programs.

Iowa Legislature Studying Plans

Under an Iowa state plan for broadcasting now under study by the legislature, multiplexing would come into great use on several levels. The proposal provides for 15 FM radio stations through the state. Multiplexing would be used by Iowa State University, the licensee of WOI (AM) Ames. It has created 12 extension districts in which a minimum of five specialists are to be stationed. They will need a great deal of continuing in-service training in their respective fields, if the plan is to work, and SCA would be used to transmit it.

Iowa has also established 16 area school districts, each with an independent board and professional staff. Area community colleges for freshmen and sophomores and Area Community Vocational Schools are to be built. They, too, will need constant in-service training. The system's multiplex capacity will also be depended upon to transmit teletype information and facsimile reproductions to the state's farmers and to any other groups which require such information.

WBAA Lafayette, Indiana, licensed to Purdue University, sees SCA as having primary use in graduate courses in engineering. The University plans to have a graduate curriculum leading to a masters degree; through multiplex it could be offered to many more people than can attend classes on campus. It would offer a similar service to consulting engineers who often must otherwise return to the university before they can take the annual tests needed to comply with state requirements.

Reaching the Disadvantaged

Multiplexing has, of course, great possibilities for reaching the disadvantaged. The proposed Negro educational station in St. Louis referred to earlier would use it to reach many of the poor in housing projects who complain of a feeling of isolation. WUOM believes it might be valuable as a channel to provide specific services for the elderly, many of whom are congregated in rest homes. It also has great possibilities for in-school stations which can teach specific groups of children with special problems while still using their main channels for the mass school audience.

The Commercial Broadcaster Enters The Picture

The commercial broadcaster is beginning to sense the possibilities in the combination of FM and multiplexing. The Triangle Broadcasting Co. offers International Correspondence School courses via its FM stations-- the company reports it has conducted successful experiments on its station in Philadelphia. The system, called "Educasting," is based on a specially designed FM receiver utilizing the multiplexing principle. The student at home presses buttons on this set in response to the multiple-choice questions he hears on his speaker, and is told via pre-set studio tapes whether he has answered correctly or not.

The Problem of Receiver Costs

The cost of multiplexing systems bears heavily on their use. A check of three of the companies which manufacture the bulk of the multiplex transmitters reveals a price range from $2,300 to $475 for a single crystal-controlled transmitter. The companies queried were: RCA, Collins, Gates.

The price of receivers is an inhibiting cost-factor from the point of view of mass use, at the present time. A true multiplex receiver needing only to be hooked into a loudspeaker or containing one ranges from $104 to about $200. The small size of the market till now has kept the price at the present high figure. Estimates of how far costs can be reduced through volume production vary. This is clearly one of the "breakthrough" areas of challenge confronting manufacturers.

The many existing plans suggest that one avenue of development might lead to a small fixed-frequency single-channel receiver designed for the mass market; the experience of domestic and foreign manufacture of low-cost transistor AM-FM sets indicates that a truly low cost receiver of this type is well within the realm of possibility. Yet even with truly unique advantages it took television many years to carve out a mass market, and no such immediate prospect of strong commercial motivation to develope the market appears to exist.

The educational broadcasters therefore, are now being asked to provide not only transmitters but receivers. This obviously is beyond their present resources. In the near future, as many universities go to branch campuses, they may undertake the burden. But only a limited use of the medium would be involved.

Until unit costs are brought down sharply, the uses of multiplexing, for the most part will involve professional and group listening. Communications to professionals and to students will thus develope at a more rapid rate than the social uses which excite the imaginations of educational broadcasters today. It may well be the case that some form of subsidy, such as federal funding will be necessary, if multiplexing is ever to fulfill its potential as a channel to the general public.

Networks

Networking is a major key to broader dissemination of educational radio services. It not only provides programming to smaller stations lacking the resources to originate a full schedule but ties together university and college campuses to enlarge instructional opportunities.

True educational networking -- the interconnected variety -- is in its infancy. The NER network, though consisting of 150 stations using a wide variety of programming material, still falls in the "tape network" category. A notable instance of an existing, interconnected group is the Wisconsin State Radio Network, whose 11 stations serve virtually the entire state. There are also, as noted previously, special two-way networks for such purposes as medical education. WOSU Columbus, Ohio, for example, which already had medical and educational networks, started in January a Veterinarians Network, initially in eight different locations, the cost being borne by the Veterinarians Association and Ohio State University, the station licensee. There are also occasional sports networks.

With FM growing in importance and plans underway within the FCC to develop a nationwide FM Allocations Table for the reserved educational FM channels, state and regional networks are on the threshold of a considerable expansion. Most of the plans involve the former but a number of educational radio stations in Michigan, Wisconsin, Indiana, Ohio and Illinois have plans for a "Big Ten" live network. There is already a cooperative production and program exchange operation under the name of the Eastern Educational Radio Network and a six-state tape FM network, spearheaded by the Appalachia Regional Laboratory may already be underway.

A Rundown of State Network Plans

Noteworthy instances of Statewide planning for educational radio networks include the following:

a. In Colorado, Station KCBL Greeley, is initiating plans for a state-wide educational radio network. This would in all likelihood include all four stations in the state.

b. Florida is also considering plans for a Statewide radio network. It hopes to situate an educational radio station at the campuses of each of its 26 junior colleges and to provide live interconnection. The initial station in the network would be located at St. Petersburg. The State has asked that noncommercial channels be reserved in each of the specified 26 cities.

c. Iowa, as explained earlier, has a plan for the development and use of radio, television and other communications services. This proposal, a one-phase plan involving an outlay of $15 million, will be considered by the state legislature during its current session and indications are that $3 million will be made available soon. Under this plan, there would be four production centers in major cities in the State, for the 15 interconnected stations.

d. In Kansas, a proposed State educational radio network would embrace seven stations, consisting of four stations now on the air and three other stations to be built at strategic locations in Kansas.

e. In Kentucky, an advisory committee on educational radio

3

was formed on October 20, 1966, to consider an outline for the State's needs. An allocations study is also being made by engineers connected to the advisory committee, designed to provide State-wide coverage. It is contemplated that within the next several years Kentucky will have a Statewide radio network, linking audio channels to the educational television network.

f. In Michigan, the State Department of Education has undertaken a study to determine the feasibility of conducting a Statewide educational broadcast network, which may embrace AM-FM stations and include subchannel utilization. Existing educational radio stations in Michigan have been linked for off-air network broadcasts, and these stations have also performed essential functions in the State-wide defense network.

g. In Minnesota, the Minnesota Private Colleges have endorsed a plan to establish a state educational radio network, with Class C stations at Duluth, Moorhead, Collegeville, Minneapolis-St. Paul, Winona, Northfield, St. Peter and Pipestone, Minnesota. The initial operation is the station associated with St. John's University of Collegeville, which began operations in December 1966. Application has also been filed for the Minneapolis FM channel. This Minnesota Private College Network also proposes to create a tie to the Eastern Educational Radio Network.

h. In New York, the Empire School of the Air provides more than 300,000 elementary grade students with over 2,200 hours of instructional materials per year, developed and broadcast by over a dozen stations. The nucleus of a State-wide educational radio network is only several years away in New York State. The State University of New York already has three stations in operation in Buffalo, Geneseo, and Binghamton. In the next three years, it plans to establish approximately nine more stations at various campuses around the State. Future plans also contemplate the entire group of stations will be linked into a State network.

i. In Ohio, Station WOSU, at Ohio State University, Columbus, desires to originate a State FM network from its central location, and has suggested that cooperative efforts be initiated with the State Educational Television Network Commission.

j. In Oregon, an educational network live and taped, is now in in the planning stage. Station KOAC, Corvallis, and Station KOAP

Portland, the twin stations of the Oregon State System of Higher Education are planning the formation of a State-wide network by means of which it would be possible to: (1) link population centers around the State for purposes of educational, cultural and public affairs broadcasting and; (2) effect general communications functions between specific towns of a region and draw on an area of the State heretofore unable to make contributions to the total programming efforts. The hope is to create additional transmitters in:

Astoria-Seaside
Tillamook
Newport
Coos Bay -North Bend
Roseburg
Grant's Pass
Medford-Ashland
Klamath Falls
Bend
Hood River-The Dalles
Pendleton
La Grand
Baker
Ontario
Lakeview
John Day

k. In Pennsylvania, the goals of proposed plans for a State-wide educational radio network are designed to intensify teaching at all school levels, provide special educational projects for drop-outs, adults and others, in-service training for teachers and more cultural and informational programs. The proposed plan envisions utilization of commercial as well as educational stations in the State through the production of more services on tape, an expansion of existing educational facilities, and an interconnection of stations via land lines, microwave, or a system of high-powered transmitting stations. Present plans propose the use of seven strategically-placed, high-powered 50 kw broadcasting stations with maximum height towers; powerful receivers could cover the majority of populated centers by picking up and passing programs "off - the - air".

l. In South Carolina, preliminary conversations have taken place at the South Carolina Educational Center and Clemson University, discussing the need for a State-wide network to be tied into the State-wide educational television network.

m. South Dakota has drafted preliminary plans for an FM network, and a multiplexing system. This network would link stations at Vermillion (KUSD) and at South Dakota State University with a proposed station at Sioux Falls, and this network could then be extended to three additional cities in the State which are now part of a State-wide educational television network.

n. In Tennessee, plans for FM networking are still in a preliminary stage. As for the moment, the proposed State-wide plans envisage a network of eight to ten stations, many of which are already in being.

o. In the State of Washington, the beginnings of a State-wide educational radio network will be established this Spring when Station KUOW Seattle, temporarily interconnects with Station KWSC for two-way medical conferences. Plans are being made to expand to Portland, Wenatchee, Ellensburg, and Cheney, if initial plans are successful.

p. In Missouri in January, 1967, the first conference of the Missouri Communications Commission was held to consider problems connected with the state plan. Educational broadcasters envision a system that would bring radio to 95 percent of the homes in the state. The Federal Communications Commission is being asked to set aside channels for Missouri state colleges located at Warensburg, Joplin, St. Joseph, Kirksville, Marysville, Cape Girardeau, Springfield, Columbus, Kansas City and Rolla. The intention is also to ask for radio channels for junior and private colleges, local high school systems and other non-profit organizations. These would be located in such cities in Missouri as Neosho, Hayti, Hillsboro, Jefferson City, Flat River, Sedalia, Poplar Bluffs and Trenton.

q. In Texas the Southern Baptist General Convention is considering setting up a network. It would initially consist of KHBL, Plainview and KWBU, Waco, licensed to Baylor University which would also transmit to stations to be built at Baylor branch campuses in Dallas and Houston. Other stations would be built at the East Texas Baptist College and the University of Corpus Christi. These colleges all belong to the Southern Baptist General Convention. In the distant future the hope is to tie this network into Southern Baptist Convention Colleges in Oklahoma and Arkansas which are hopeful of getting into educational broadcasting.

It should be noted that, in some cases, the radio networks are being considered in tandem with television for the economics involved, the aural medium being a hitch-hiker on TV's technical facilities. For the South Dakota FM multiplex plan previously referred to six television towers and building sites will be available for FM gear. The proposed microwave network will provide a high grade channel for stereo broadcasts and an almost unlimited number of high frequency channels. The operating cost of microwave interconnection is expected to be nominal. Further, with large electrical loads coming to TV sites, rates for FM should be low. TV operators can monitor FM equipment and the latter can be operated remotely when TV operators are gone. Finally, rates for using the FM channels on the microwave network are expected to be nominal, also. The major cost will be for six 10 kw. transmitters and necessary antennae. This is estimated at $60,000 per station of a total of $360,000.

THE POTENTIALS FOR MINNESOTA OF AN FM STATION AND NETWORK

A Statement By the University of Minnesota

With its long background of experience in AM broadcasting, the University of Minnesota is fully prepared to make effective use of FM. A single station would provide coverage of the metropolitan Minneapolis-St. Paul area, a network would bring these programs to the major population area of Minnesota and also could provide studios for the origination of programs elsewhere in the state.

Since any station or network would draw upon the programming potentials, not only of the University of Minnesota but also of many other educational and cultural organizations in this area, it's potential resources would be tremendous. In future years interconnections could be made between the educational FM network in Minnesota and those of surrounding states, which would provide a still greater range of program sources and distribution.

An FM station would provide the University and other Twin City educational groups with an evening radio outlet, something impossible with the University present AM facility. The most frequent question asked by KUOM listeners throughout the years has been, "Why don't you broadcast in the evening?" As pointed out above, the sunset sign-off requirement means that KUOM can never broadcast later than 9:00 p.m., and in mid-winter must sign-off at 4:30. In addition to limiting the hours available, the requirement for irregular sign-off poses the difficulty of building audiences for programs available during only a few months each year. Furthermore, the latest hours are in the summertime, when the audience for serious material is not as large as during the winter.

Additional time would make it possible to both extend and enrich KUOM'S services. At present there are not enough hours for much available material, such as lectures, seminars, and concerts. An extension of time also would make it possible to utilize many fine programs from the British Broadcasting Corporation, the National Association of Educational Broadcasters, the Canadian Broadcasting Corporation, the Broadcasting Foundation of America, and other local, state, regional, national, and international sources, which cannot be used now due to time limitations.

Multiplexing Expands Service Possibilities

Even more important, however, is the fact that the multiplexing capability of FM would enable us to serve simultaneously both the general public and various special audiences. On its main channel KUOM-FM could offer significant public affairs, news, special events, fine music, and other programs for general audiences, at the same time that subcarriers were used for special-interest materials.

Broadcasts for in-school use now are limited to 10 or 12 15-minute periods per week. If a subcarrier could be used for such material however, more programs could be presented, and each could be repeated several times for the convenience of the classes concerned. In view of our continuing success with in-school programming since it was begun 35 years ago, the potential of a special carrier would be tremendous.

Subchannels could be used for in-service teacher education as well as for broadcasts designed for children and young people. School superintendents might wish to broadcast on a regular schedule to their teachers in city systems; scheduled meetings with school boards of comparable school districts could help members explore mutual problems; workshops in specialized materials -- languages, literature, health, music, etc. -- could be conducted for more teachers; and State Department of Education subject matter consultants could report and advise out-in-state teachers.

The number and types of programs presented for in-school student listening could also be greatly expanded. In addition to more regular series, broadcast more often, special programs might include school concerts by the Minneapolis Symphony Orchestra; regularly scheduled programs to supplement the work of visiting teachers for the home-bound child; inter-school broadcasts of band rehearsals, school choir practices, instrumental sessions, etc., with evaluation by appropriate music consultants; and all-school convocations for children of various levels with local and national leaders talking specifically to the children on such subjects as civic responsibility, air pollution, civil rights, and family life education.

Expansion In Services For Agriculture

Services for agriculture, offered by University radio since the 1930's could be tremendously expanded with FM multiplex. Developed from the resources of the Cooperative Extension Service of the University's Institute of Agriculture, these could include lectures, conferences, and discussions, for general groups as well as for specialists in different types of farming, 4H club groups, and people concerned with the business aspects of agriculture. The county agent organization could be utilized not only to plan such programs, but also to develop audiences for them and to assure effective utilization.

The General Extension Division of the University has established special services in continuing education for women, lawyers, engineers, business administrators, pharmacists, dentists, and doctors, among others. The Continuing Education of Women is an example. Many well-educated women are working in jobs below their capacity because of the difficulties they encounter in returning to work because their skills and knowledge are outdated. Radio courses might help these women re-enter the labor market at a higher level, thus benefiting both themselves and society. Four groups of women could particularly benefit from educational FM programs: women with small children who find it difficult to attend on-campus classes; women in small communities some distance from the University who need more specialized courses than are conveniently available to them; women interested in continuing their education, but who must minimize tuition expenditures in order to favor college attendance by younger members of their families; and, women who could be more effective in community volunteer activities if they had the broader knowledge available from courses adapted to their needs and interests.

Continuing Business Education

Continuing business education is another promising field. If FM multiplex broadcasts were combined with telephone talk backs and electro-writers, continuing business education seminars could be offered. Much work also could be done in medical and dental fields. A number of medical centers throughout the country utilize FM in post-graduate and continuing education, but the absence of FM facilities here has prevented such developments in Minnesota, despite the excellent teaching resources of the Medical School at the University and of the Mayo Clinic in Rochester. Broadcast services could be developed not only for general practitioners, but also for hospitals and workers in related areas like public health nursing.

Responding to the great demand for better sex education in homes, schools, and churches, the University's General Extension Division has appointed a Coordinator for Parent and Family Life Education to conduct courses for parents, church groups, PTA's, social agencies, educators, and others. In September 1965, the University's first Sex Education Institute was attended by more than 400 educators, religious educators, social workers, nurses, and parents. Two subsequent institutes have been even more successful, and one experiment was conducted in which a telephone installation was used for a tele-lecture followed by questions from the audience. Multiplex FM, developed first in the Twin Cities and then on an all-state basis, offers many possibilities for Parent and Family Life Education.

Continuing Education In Pharmacy and Law

Pharmacy education is another field. The Director of Continuing Pharmacy Education is now in the initial stages of developing a program for registered pharmacists in the state. A peculiar problem in the post-graduate education of pharmacists is the fact that a pharmacist must be at attendance at all times in a drug store. This means, therefore, that since the audience cannot come to us, we must come to it, and late evening or Sunday morning FM programs would provide the means.

The University of Minnesota and the Minnesota State Bar Association are working together to develop a state-wide project in continuing legal education which could make good use of FM facilities. Through live broadcasts and telephone connections, lectures by outstanding authorities in various fields of law could be brought to members of the bar in all parts of the state, followed by discussions of the points raised during the talks.

The World Affairs Center, another department in the General Extension Division, has carried on a very active world affairs education program for some years, organizing many meetings, discussions and seminars for people of all ages. FM subcarriers could be used to offer in-service training programs to social studies teachers, and lectures and talks to clubs and organizations. The large group of organizations which works cooperatively with the Minnesota World Affairs Center could be drawn upon to develop subject matter, plan presentations, and stimulate effective utilization.

Courses for credit based upon high school, college, and University sources are the last example to be cited here of the potential uses of an FM multiplex facility.

University Prepared to Experiment

The University of Minnesota alone, with its thousands of offerings in day school, evening classes, and correspondence study, and drawing upon over twenty-five years experience in broadcasts from its own class rooms, is prepared to experiment extensively in developing credit courses for the general public as well as for special interest groups. These would utilize not only the resources of the General Extension Division, but also of the University's many other divisions and colleges.

The University of Minnesota, therefore, urges the Congress to provide funds with which to construct educational FM broadcasting facilities. But for the absence of such funds, the University would have constructed and operated an FM station long before now. But confronted with requests from its many departments to support their varied and extensive activities, the University Administration has been unable to find money for an FM radio station. When support becomes available, however, the University will construct and operate a station in the Minneapolis - St. Paul area, drawing upon the extensive resources of the Twin Cities in programming it. Thereafter, the University will work cooperatively with other educational institutions, both public and private, to construct additional transmitters elsewhere in Minnesota, together with studio facilities where required. These would be then used in developing a statewide educational FM service.

APPENDIX

TABLE A-1a

FUTURE BUDGET OPERATION

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	58	100%[4]	14	100%[4]	1	100%[4]	21	100%[4]	52	100%[4]	73	100%[4]
For those who responded on future budget operations:												
Higher than present budget	55	95%	12	86%	1	100%	19	91%	49	94%	68	93%
Same as present budget	3	5%	2	14%	--	--	2	9%	3	6%	5	7%
$1,000 and under	--	--	--	--	--	--	--	--	--	--	--	--
Over $1,000-5,000	3	5%	2	14%	--	--	4	19%	1	2%	5	7%
Over $5,000-10,000	6	10%	--	--	--	--	6	28%	--	--	6	8%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

TABLE A-1b

FUTURE BUDGET OPERATION (Continued)

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	58	100%[4]	14	100%[4]	1	100%[4]	21	100%[4]	52	100%[4]	73	100%[4]
Over $10,000-20,000	3	5%	--	--	--	--	1	5%	2	4%	3	4%
Over $20,000-35,000	9	16%	2	14%	--	--	9	43%	2	4%	11	15%
Over $35,000-50,000	1	2%	2	14%	--	--	--	--	3	6%	3	4%
Over $50,000-100,000	17	29%	5	37%	--	--	1	5%	21	40%	22	30%
Over $100,000-150,000	5	9%	1	7%	--	--	--	--	6	11%	6	8%
Over $150,000-200,000	7	12%	1	7%	--	--	--	--	8	15%	8	11%
Over $200,000-300,000	3	5%	1	7%	--	--	--	--	4	8%	4	6%
Over $300,000-500,000	3	5%	--	--	1	100%	--	--	4	8%	4	6%
Over $500,000-800,000	1	2%	--	--	--	--	--	--	1	2%	1	1%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 51: Future Budget Operation

TABLE A-2

PRESENT PROGRAM PURCHASES

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	70	100%[4]	22	100%[4]	5	100%[4]	28	100%[4]	69	100%[4]	97	100%[4]
For those respondents who reported on present program purchases:												
Less than $1,000	20	29%	12	55%	--	--	15	54%	17	25%	32	33%
$1,000-2,500	18	26%	6	27%	--	--	7	25%	17	25%	24	25%
$2,500-5,000	17	24%	1	4%	--	--	3	11%	15	21%	18	19%
$5,000-10,000	10	14%	1	4%	1	20%	1	3%	11	16%	12	12%
$10,000-20,000	2	3%	1	5%	2	40%	--	--	5	7%	5	5%
None - no purchases	3	4%	1	5%	2	40%	2	7%	4	6%	6	6%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 51: Budget

TABLE A-3a

HOW AND WHERE DOES THE LICENSEE SEEK ADDITIONAL FUNDS FOR STATION OPERATION

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
None - additional funds not sought or received	35	36%	19	63%	--	--	13	43%	41	39%	54	40%
Donations - local businesses, service clubs, alumni, etc.	25	26%	5	17%	2	29%	10	33%	22	21%	32	24%
Business Services - services station provides for listeners and outside groups	11	11%	1	3%	4	57%	2	7%	14	13%	16	12%
National Educational Radio	13	13%	1	3%	--	--	--	--	14	13%	14	10%
Foundations	9	9%	1	3%	1	14%	1	3%	10	10%	11	8%

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1 Includes state-owned facilities
2 Includes private non-profit organizations, religious institutions, foundations
3 Includes stations between 11-19 watts
4 100% represents the number of respondents in each category

TABLE A-3b

HOW AND WHERE DOES THE LICENSEE SEEK ADDITIONAL FUNDS FOR STATION OPERATION (Continued)

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
College-School Funds - deans office, department of speech, etc.	7	7%	2	7%	1	14%	3	10%	7	7%	10	7%
Government-Federal Funds - U.S. Office of Higher Education, etc.	6	6%	1	3%	--	--	2	7%	5	5%	7	5%
Grants in Aid - no specific source mentioned	3	3%	--	--	--	--	--	--	3	3%	3	2%
Borrowing	--	--	--	--	3	43%	--	--	3	3%	3	2%
State Department of Education	2	2%	1	3%	--	--	--	--	3	3%	3	2%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

HOW AND WHERE DOES THE LICENSEE SEEK ADDITIONAL FUNDS FOR STATION OPERATION (Continued)

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
Any Source - any way we can get it	--	--	1	3%	1	14%	--	--	2	2%	2	1%
Don't Know if additional funds are sought	1	1%	--	--	--	--	1	3%	--	--	1	1%
Social Events; Sponsors Dances/ Radio Club Raises Money/	--	--	2	7%	--	--	—	--	2	2%	2	1%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 5: How does the licensee seek additional funds for the operation of the station?

TABLE A-4

NUMBER OF PART TIME EMPLOYEES

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
None	6	6%	10	33%	2	29%	7	23%	11	10%	18	13%
1-3 part time employees	29	30%	10	33%	--	--	11	37%	28	27%	39	29%
4-6 part time employees	23	23%	9	30%	2	29%	6	20%	28	27%	34	25%
7-10 part time employees	5	5%	1	4%	1	13%	2	7%	5	5%	7	5%
More than 10	19	19%	--	--	2	29%	--	--	21	20%	21	16%
Number of part time employees not specified	16	16%	--	--	--	--	4	13%	12	11%	16	12%

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[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 8: How many paid employees are part time?

TABLE A-5

PROGRAMMING SERVICES TO SPECIALIZED AUDIENCES

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES	32	33%	13	43%	7	100%	5	17%	47	45%	52	38%
NO	63	64%	15	50%	--	--	21	70%	57	54%	78	58%
NO ANSWER OR NOT APPLICABLE	3	3%	2	7%	--	--	4	13%	1	1%	5	4%

---

[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 113: Are you now providing programming services to specialized audiences such as shut-ins, the handicapped, physicians, etc.?

TABLE A-6

IS LICENSEE ASKED TO PRODUCE, OR HELP PRODUCE, PROGRAMS BY OUTSIDE ORGANIZATIONS

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES - are asked to produce (or help produce) programs by outside organizations	73	74%	13	43%	7	100%	17	57%	76	72%	93	69%
NO - are not asked to produce (or help produce) programs by outside organizations	25	26%	17	57%	--	--	13	43%	29	28%	42	31%
Unable to when asked	20	20%	5	17%	--	--	2	7%	23	22%	25	19%

---

[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 13: Are you asked to produce (or help produce) programs by outside organizations?

TABLE A-7a

DEGREE THAT LICENSEE PARTICIPATES IN DECISIONS OF POLICY ON PROGRAMMING

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
Participates a great deal	30	31%	11	37%	1	14%	7	23%	35	33%	42	31%
Participates somewhat	20	20%	6	20%	4	57%	5	17%	25	24%	30	22%
Participates very little	47	48%	12	40%	2	29%	18	60%	43	41%	61	46%
Does not participate	1	1%	1	3%	--	--	--	--	2	2%	2	1%

---

[1] Includes state-owned facilities
[2] Includes private non-profit organizations, religious institutions, foundations
[3] Includes stations between 11-19 watts
[4] 100% represents the number of respondents in each category

Question 4: To what degree does the licensee participate in decisions of policy on programming?

DEGREE THAT LICENSEE PARTICIPATES IN DECISIONS OF POLICY ON PERSONNEL

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
Participates a great deal	38	39%	21	70%	1	14%	13	43%	47	45%	60	45%
Participates somewhat	16	16%	2	7%	--	--	5	17%	13	12%	18	13%
Participates very little	43	44%	7	23%	6	86%	12	40%	44	42%	56	41%
Does not participate	1	1%	--	--	--	--	--	--	1	1%	1	1%

---

[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 4: To what degree does the licensee participate in decisions of policy on personnel?

TABLE A-7c

DEGREE THAT LICENSEE PARTICIPATES IN DECISIONS OF POLICY ON EQUIPMENT

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
Participates a great deal	46	47%	18	60%	1	14%	14	47%	51	49%	65	48%
Participates somewhat	8	8%	5	17%	1	14%	4	13%	10	9%	14	10%
Participates very little	43	44%	7	23%	5	72%	12	40%	43	41%	55	41%
Does not participate	1	1%	--	--	--	--	--	--	1	1%	1	1%

---

[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 4: To what degree does the licensee participate in decisions of policy on equipment?

TABLE A-7d

DEGREE THAT LICENSEE PARTICIPATES IN DECISIONS OF POLICY ON BUDGET

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
Participates a great deal	66	67%	23	77%	5	71%	20	67%	74	70%	94	70%
Participates somewhat	11	11%	3	10%	--	--	3	10%	11	11%	14	10%
Participates very little	21	22%	4	13%	2	29%	7	23%	20	19%	27	20%

---

[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 4: To what degree does the licensee participate in decisions of policy on budget?

TABLE A-8

DOES LICENSEE ALTER OPERATING SCHEDULE DURING SUMMER MONTHS

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
YES: Operating schedule is altered during the summer months	52	53%	26	87%	--	--	26	87%	52	49%	78	58%
NO: Operating schedule is not altered during the summer months	46	47%	4	13%	7	100%	4	13%	53	51%	57	42%

---

[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 11: Do you alter your operating schedule during the summer months?

TABLE A-9

HOW OFTEN IS OUTSIDE TALENT PAID FOR APPEARANCES?

	College/ University[1]		Public School/ Library		Other Licensees[2]		10 Watts[3]		All Others		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Respondent Stations	98	100%[4]	30	100%[4]	7	100%[4]	30	100%[4]	105	100%[4]	135	100%[4]
Always paid	--	--	1	3%	--	--	--	--	1	1%	1	1%
Sometimes paid	27	28%	10	34%	6	86%	1	3%	42	40%	43	32%
Never paid	68	69%	18	60%	1	14%	26	87%	61	58%	87	64%
No answer	3	3%	1	3%	--	--	3	10%	1	1%	4	3%

---

[1] Includes state-owned facilities

[2] Includes private non-profit organizations, religious institutions, foundations

[3] Includes stations between 11-19 watts

[4] 100% represents the number of respondents in each category

Question 49: Budget

EDUCATIONAL COMMUNICATIONS SYSTEMS (ECS)

The ECS Study was performed by the NAEB,
under a contract from the U.S. Office of Education

The Educational Communications System project is a four-phase study that would lead to the linking of American colleges and universities via electronic interconnection. The first step involved studying the present state of interconnection between the educational institutions, and determining what kind of cooperation would be given to an overall "master" plan. The second step consisted of surveying some 50 colleges and universities in order to learn the views of administrators and faculty members on the need for interconnecting the separate schools.

The third step -- reported here -- consisted of designing three "model" systems of electronically linking the various educational institutions. From these models could be drawn more specific data on how the systems would be used, who would use them most often, what deficiencies would they possess, and so on. (The fourth and final step of the project would consist of actually establishing the model systems from Phase III on an experimental basis. As of this writing, Phase IV is in the planning stage.

Three models -- or hypothetical systems -- were established in the third phase of the project. They were:

1. Inter-state, which involved linking a number of institutions in the Great Lakes region of the United States. Cooperating were the "Big Ten" universities and the University of Chicago.

2. Intra-state, which involved linking a variety of institutions within one state. The Oregon State System of Higher Education was used as the model.

3. Educational Resources, which involved connecting libraries, research facilities, cultural and scientific institutions with educational centers of the other two models.

The ECS system would provide 12 telephone channels, or a large number of teletype circuits, or a broad-band transmission that would permit data to be fed from computer to computer. Broadcast-quality tv pictures could also be fed along the lines.

In the Inter-state model, representatives from all major departments -- agricultural, economics, psychology, law, etc. -- were included in the university groups. Also included were those persons from the administrative areas --registrar offices, business offices, libraries, data processing centers, etc. -- who might benefit by transmitting information to one another.

Queried by mail over a four-month period, faculty members contributed 262 individual "ideas" on how the system might be utilized. Some of the ideas put forth for use of the system were: a common video-tape recorded lecture played locally at each school, followed by an audio discussion over the ECS wires by the viewers at the various colleges; ECS thesis conference between a student at one school and a professor at another; exchange of teacher-education research materials via teletype; athletic contests played at the different schools, with scores transmitted (as in bowling, track events, etc.) over the ECS wires; transmission of weather maps for geology students; access to and slow-scan tv transmission of mathematics abstracts; and an administration's admission officer could confer with the mentor of a student seeking admission. Dozens of other ideas, and variations on the above, centered on the retrieval of information from distant libraries and data centers for student use, administration, research and other uses.

An important part of the Midwest ECS model (Inter-State) would be the establishment of a "live" radio network. The network, programming about 21 hours each week, would supplement the various stations operated by numerous universities, and the National Education Radio Network -- a tape distribution system of the National Association of Educational Broadcasters which supplies recorded programs t some 150 affiliates. The network would carry programs from the different schools, use its narrow-band services to aid in data-retreival, serve as an "educational laboratory" and training ground, and form a nucleus on which to build a nationwide educational service.

In the Intrastate ECS model, connecting all higher educational institutions in Oregon, (nine, plus the State Capitol), it was found the system would: permit libraries to exchange material and information more rapidly and efficiently; allow administrative offices to be in direct contact with each other; provide for exchange of instructional information--lectures, demonstrations--between schools; include the Capitol to expedite appropriate liaison activities, and, among others, allow individual faculty to transmit and receive a variety of data.

Many of the uses of the Intrastate system, of course, are similar to those of the Interstate system; ideally many of the institutions in a state-wide system could eventually be linked with those of other states.

Members of the institutions participating in the Midwest and Oregon models were asked how they would use a multi-purpose communications system, and it quickly became apparent that not only the institutions would have to be interconnected, but that they would have to be linked to libraries, research centers and others outside the traditional academic boundaries. For the time being, interconnecting 10 such centers from New York to Iowa was contemplated. Included were the American Institute of Physics, the Educational Testing Service, the Smithsonian Institution, Rare Earth Information Center, Pace College, American Museum of Natural History, and Chemical Abstracts Service, among others. This is the Educational Resources model of ECS.

Once Phase IV is a reality, and the three systems are in operation, users would be queried periodically to determine: (a) What did the system enable them to do that they could not do before? (b) How satisfactory was the performance of the system? (c) How accessible was the system? (d) What is the value of the sytem to those using it extensively and those using it minimally?

Additionally, it will be necessary to make cost efficiency and operational reliability studies, to see whether demands are being met, and whether there is a need for expansion.

Full details, both engineering and financial, are available in the Final Report on Project No. 450A, Contract No. OE-5-16-014, of the National Association of Educational Broadcasters. The foregoing is a summation of that report.

ORGANIZATIONS SERVED BY EDUCATIONAL RADIO STATIONS
(A Sampling)

During the coming year WOUB Athens, Ohio, has planned programs with the following organizations or groups:

Institute for Regional Development
Center for Economic Opportunity
Appalachia Educational Laboratory
Athens County School System
Athens Planning Commission
Tri-County School System
Ohio State Natural Resources Division
Athens City Council
Athens Fire Department
Athens County Welfare Society
Athens County Historical Society
The Aid for the Aged
Boy Scouts of America
Soil Conservation
4-H Clubs
Ohio County Commissioners
Athens Bar Association
Athens Business Association
Ohio University Extension Division
Ohio University Off-Campus Affairs
Music Federation of America
Athens Hospital Foundation

Below is a partial listing of organizations which have been given time in the past year on WOSU Columbus, O., and on WNYE New York, the in-school station:

Cosi Planetarium--Center of Science & Industry
Committee on Employment of the Handicapped
Franklin County Society for Crippled Children
Franklin County Child Welfare Board
Kidney Foundation of Central Ohio
Columbus Careers Conference
Freedom Heritage Goundation
TWIGS of Children's Hospital
Meals on Wheels
Ohio Union
Neighborhood Services
Kinder Key
The Friends Home
Savings Bonds
United Appeal
Junior Achievement

Columbus Business & Professional Women
Epilepsy Association of Franklin County
Parents and Teachers Association
Columbus Area Council on Alcoholism, Inc.
Listening Post & Coffee House
Children's Mental Health Center
Columbus Public Library
U. S. Navy Recruiters
League of Women Voters
People's Poverty Board
Anti Defamation League
Volunteers of America
Columbus Post Office
Dial-a-Dietician
Juvenile Diagnostic Center
Columbus Gallery of Arts
Urban League
Church World Service
Goodwill Industries
Toys for Tots
Care
Charity Newsies
Salvation Army
Godman Guild
Arts & Crafts Center
House of Hope
Board of Education
Peace Corps
Girl Scouts

Public service was rendered by WNYE during 1965-66 in connection with the following organizations and events:

Action for Clean Air Committee
American Cancer Committee
American Heart Association
American Public Health Association
American Red Cross
Associated Blind, Inc.
Big Brothers of America
Boy Scouts of America
Brooklyn Children's Museum
Brotherhood Week
CARE
Career Opportunities for Youngsters
City Commission on Human Rights
Dental Health Week
Epilepsy Association of America
Industrial Home for the Blind
National Association for the Prevention of Addiction to Narcotics
National Safety Council
National Tuberculosis Association
New York Center for the Five-Day Plan to Stop Smoking
New York Diabetes Association
New York State Division of Veterans' Affairs
New York Police Narcotics Bureau
Radio Free Europe
Retarded Infants Service
UNICEF
United Nations Day
United States Peace Corps

COMMERCIAL STATIONS SERVED BY EDUCATIONAL RADIO

(A Sampling)

The following is a list of commercial stations supplied with programs by WKAR, East Lansing, Michigan, and KWSC, Pullman, Washington, two educational radio broadcasters. During 1966, WKAR, East Lansing distributed its programs to a total of 146 stations covering a range of 15 states and Canada, and KWSC, Pullman to 95 commercial stations in the Northwest.

WKAR East Lansing, Michigan

Michigan

WAAM	Ann Arbor
WABJ	Adrian
WAGN	Menominee
WALM	Albion
WAMM	Flint
WAOP	Otsego
WATC	Gaylord
WATT	Cadillac
WATZ	Alpena
WBCH	Hastings
WBCK	Battle Creek
WBCM	Bay City
WBRB	Mt. Clemens
WBRN	Big Rapids
WCAR	Detroit
WCBY	Cheboygan
WCCW	Traverse City
WCEN	Mt. Pleasant
WCER	Charlotte
WCKD	Ishpeming
WCRM	Clare
WCSR	Hillsdale
WDMJ	Marquette
WDOW	Dowagiac
WELL	Battle Creek
WERX	Wyoming
WEXL	Royal Oak
WFDF	Flint
WFJC	Flint
WFUR	Grand Rapids
WFYC	Alma
WGHN	Grand Haven
WGMZ	Flint
WGON	Munising
WGRD	Grand Rapids
WHAK	Rogers City
WHDF	Houghton
WHFB	Benton Harbor
WHGR	Houghton Lake
WHLS	Port Huron
WHMI	Howell
WHSB	Alpena
WHTC	Holland
WIDG	St. Ignace
WION	Ionia
WIOS	Tawas City
WITL	Lansing
WJBK	Detroit
WJBL	Holland
WJEF	Grand Rapids
WJFM	Grand Rapids
WJIM	Lansing
WJLB	Detroit
WJML	Petoskey
WJMS	Ironwood
WJOR	South Haven
WJPD	Ishpeming
WJPW	Rockford
WJR	Detroit
WJUD	St. Johns
WKBZ	Muskegon
WKFR	Battle Creek
WKHM	Jackson
WKJR	Muskegon Hgts.
WKLA	Ludington
CKLW	Detroit
WKLZ	Kalamazoo
WKMF	Flint
WKMI	Kalamazoo
WKNR	Dearborn
WKNX	Saginaw
WKPR	Kalamazoo
WKYO	Caro
WKZO	Kalamazoo
WLAV	Grand Rapids
WLDM	Detroit
WLDR	Traverse City
WLEN	Adrian
WLEW	Bad Axe
WLKM	Three Rivers
WLST	Escanaba
WMAX	Grand Rapids
WMBN	Petoskey
WMDN	Midland
WMIQ	Iron Mntn.
WMPC	Lapeer
WMPL	Hancock
WMRP	Flint
WMTE	Manistee
WMUS	Muskegon
WNEM	Saginaw
WNIL	Niles
WOAP	Owosso
WOIA	Ann Arbor
WOMC	Royal Oak
WOOD	Grand Rapids
WPAG	Ann Arbor
WPLB	Greenville
WQRS	Ferndale
WQTE	Monroe
WSAM	Saginaw
WSGW	Saginaw

WSHN Fremont
WSJM St. Joseph
WSMA Marine City
WSOO Sault Ste. Marie
WSTR Sturgis
WTAC Flint
WTAK Garden City
WTCM Traverse City
WTIQ Manistique
WTPS Portage
WTRU Muskegon
WTRX Flint
WTTH Port Huron
WTVB Coldwater
WVIC Lansing
WVOC Battle Creek

WWTV Cadillac
WWJ Detroit
WXOX Grand Rapids
WXTO Grand Rapids
WXYZ Detroit
WYNZ Ypsilanti
WYSI Ypsilanti

Out of State Radio Stations

WAVE Louisville, Ky.
CBC Toronto, Canada
WCCO Minneapolis, Minn.
WCMR Elkhart, Indiana
WGN Chicago, Illinois
KGBS Los Angeles, Cal.

WWGY Schenectady, N.Y
WHO Des Moines, Ia.
WHOF Canton, Ohio
WIBA Madison, Wisc.
WIBW Topeka, Kans.
WKTY La Crosse, Wisc.
WKY Oklahoma City, Ok.
WLW Cincinnati, Ohio
WLYV Fort Wayne, Ind.
WMAY Springfield, Ill.
WMT Cedar Rapids, Ia.
WNAX Yankton, S.D.
WOW Omaha, Neb.
WSM Nashville, Tenn.
WTMJ Milwaukee, Wisc.

KWSC Pullman, Washington

KACA Prosser
KALE Richland
KAPA Raymond
KAPS Mt. Vernon
KAPY Port Angeles
KARI Blaine
KARY Prosser
KASY Auburn
KAYE Puyallup
KAYO Seattle
KBAM Longview
KBBO Yakima
KBKW Aberdeen
KBLE Seattle
KBRC Mount Vernon
KCLX Colfax
KCVL Colville
KDNC Spokane
KDUX Aberdeen
KEDO Longview
KELA Centralia
KENE Toppenish
KEPR Pasco
KETO Seattle
KFDR Grand Coulee
KFKF Bellevue
KGEM Boise, Idaho

KGMI Bellingham
KGW Portland
KGY Olympia
KHIT Walla Walla
KHQ Spokane
KIMA Yakima
KING Seattle
KIRO Seattle
KIRX Kirksville, Mo.
KISN Portland, Ore.
KIT Yakima
KITN Olympia
KJDY John Day, Ore.
KJR Seattle
KLYN Lynden
KLO Ogden, Utah
KMAS Shelton
KMCS Seattle
KMO Tacoma
KNEW Spokane
KOIN Portland, Ore.
KOL Seattle
KOMO Seattle
KOMW Omak
KONP Port Angeles
KORD Pasco
KOZE Lewiston, Idaho

KOZI Chelan
KPEG Spokane
KPOR Quincy
KPUG Bellingham
KREM Spokane
KREW Sunnyside
KRKO Everett
KRNS Burns, Ore.
KRPL, Moscow, Idaho
KRSC Othello
KSEM Moses Lake
KSPO Spokane
KSRV Ontario, Ore.
KTEL Walla Walla
KTNT Tacoma
KTOY Tacoma
KTW Seattle
KUDY Spokane
KUEN Wenatchee
KUJ Walla Walla
KULE, Ephrata
KUMA Pendleton, Ore.
KUTI Yakima
KVNI Coeur d'Alene, Ida.
KWIQ Moses Lake
KWYZ Everett
KXA Seattle

KXLE	Ellensburg
KXLY	Spokane
KXRO	Aberdeen
KYMN	Portland, Ore.
KZUN	Opportunity
KBRO	Bremerton
KGME	Centralia
KHOK	Hoquiam
KLFF	Spokane
KPUL	Pullman
KOQT	Bellingham
KPQ	Wenatchee
KQOT	Yakima
KVI	Seattle

STATIONS SERVED BY WBAA LAFAYETTE, INDIANA

The following is a list of stations, some commercial but the large majority educational in-school, to which WBAA Lafayette, Indiana licensed to Purdue University, has distributed its "School of the Air" series.

WADM, Joseph S. Klarke
233 N. 2nd Street, Decatur, Indiana 46733

History Highlights
Folklore of America
Creative Thinking: The American Pioneers
Our Hoosier Heritage
Lady Storyteller
News In Focus

WAEF-FM, Shirley Fishman
6004 Wiehe Road, Cincinnati, Ohio 45237

History Highlights

WBDG-FM, Robert Berry
1200 North Girls School Road, Indianapolis, Indiana 46224

History Highlights
Folklore of America
Creative Thinking: The American Pioneers
Our Hoosier Heritage
Words we Use
Our Working World - 1
Our Working World - II
Then and Now
Lady Storyteller
News in Focus

WCNB, Francis Chomel
406 Central Ave., Connersville, Indiana 47331

Creative Thinking: The American Pioneers
Our Hoosier Heritage
Our Working World - I
Lady Storyteller
News in Focus

WCTW, Miles Marshall
R.R. # 1, New Castle, Indiana 47362

Creative Thinking: The American Pioneers
Our Hoosier Heritage
Our Working World - I
Lady Storyteller
News in Focus

WETL, Jerry Limbert
620 West Washington, South Bend, Indiana 46601

Creative Thinking: The American Pioneers
Our Hoosier Heritage
Words We Use
Then and Now
Lady Storyteller

WGVE-FM, Lawrence Ventura
415 West 45th Ave., Gary, Indiana 46408

History Highlights
Folklore of America
Creative Thinking: The American Pioneers
Our Hoosier Heritage
Words we Use
Our Working World - I
Lady Storyteller
News in Focus

WHBU, John R. Atkinson
P.O. Box 610, Anderson, Indiana 46015

History Highlights
Folklore of America
Our Hoosier Heritage
Our Working World - I
Lady Storyteller

WIAN, Nancy Hendricks
3401 North Meridan, Indianapolis, Indiana 46207

- History Highlights
- Our Hoosier Heritage
- Words we Use
- Lady Storyteller
- News in Focus

WIBC, Jim Darin
2835 North Illinois St., Indianapolis, Indiana 46208

- History Highlights
- Folklore of America

WIFN, Scott Ridener
P.O. Box 194, Franklin, Indiana 46131

- Creative Thinking: The American Pioneers
- Our Hoosier Heritage
- News in Focus

WKMO-FM, Hugo J. DiSalvo
P.O. Box 732, Kokomo, Indiana 46901

- Creative Thinking: The American Pioneers
- Our Hoosier Heritage
- Words we Use
- Lady Storyteller
- News in Focus

WPSR, Claude B. Smith
726 Wedeking Avenue, Evansville, Indiana 47711

- Our Hoosier Heritage
- Lady Storyteller

WREY, Karen Carpenter
Box 634, New Albany, Indiana 47150

- Our Hoosier Heritage

WTCA, Roger E. Wellman
208 North Water Street, Plymouth, Indiana 46563

History Highlights
Folklore of America
Creative Thinking: The American Pioneers
Our Hoosier Heritage
Words we Use
Our Working World - I
Our Working World - II
Then and Now
Lady Storyteller
News in Focus

WTHI-FM, Wayne Jenkins
918 Ohio Street, Terre Haute, Indiana 47808

Our Hoosier Heritage

WTTV-FM, Jack Noel
535 South Walnut Street., Bloomington, Indiana 47401

History Highlights
Folklore of America
Creative Thinking: The American Pioneers
Our Hoosier Heritage
Words we Use
Our Working World - I
Our Working World -II
Then and Now
Lady Storyteller
News in Focus

WVSH-FM, Richard A. DeFore
John & Guilford Streets, Huntington, Indiana 46750

History Highlights
Folklore of America
Creative Thinking: The American Pioneers
Our Hoosier Heritage
Our Working World - I
Our Working World - II
Then and Now
Lady Storyteller

WWHI-FM, James F. Bailey
2000 S. Franklin, Muncie, Indiana 47302

History Highlights
Our Hoosier Heritage
Words we Use
Then and Now
Lady Storyteller
News in Focus

WSKS, James R. Oliver
Wabash High School
Wabash, Indiana 469992

History Highlights
Folklore of America
Creative Thinking: The American Pioneers
Our Hoosier Heritage
Words we Use
Our Working World - I
Our Working World - II
Then and Now
Lady Storyteller
News in Focus

WIMS, Mr. James Wagner
Audio-Visual Director
Michigan City Schools
609 Lafayette
Michigan City, Indiana

Folklore of America
Our Hoosier Heritage

WGCS, Mr. J. F. Swartzendruber
Goshen College
Goshen, Indiana 46526

History Highlights
Folklore of America
Lady Storyteller
News in Focus

WLOI, Mr. Dan Casear
Program Director
P. O. Box 385
La Porte, Indiana 46350

IN-SCHOOL PROGRAMMING FOR SPECIAL GROUPS

by Arnold Hartley

(Arnold Hartley is a veteran commercial broadcaster who has spent much of his life in ethnic radio. He has been a writer, a station manager and an owner. He is currently the executive vice president of KATZ, St. Louis. The station has created the St. Louis Assistance Fund which is sponsoring an effort to get the first all-Negro educational radio station to be built in that city).

In my view there are a number of practical steps which could be taken to make greater use of existing in-school radio broadcasting facilities. These are:

1. Utilization by educational FM stations of time during which they presently do not operate, for the development of extensive educational programming directed to special groups and conducted by qualified members of these groups.

2. Development of specific programming for schools in which a preponderant majority of pupils is of a special group. Such special programming occasionally crops up now in educational FM schedules. This suggestion refers to a massive, daily use of such material.

3. Involvement of the students themselves in programming for their special group. Uninhibited exposition by the students themselves of sociological realities of the communities in which they live. The microphone, in short, should be placed in the classroom without censorship. There is perhaps a tendency to excessive formal "production" in educational programming. Neatness is not a factor here.

4. Organization of Radio Clubs among students in high schools with preponderant specialized enrollment, and utilization of the educational facility by these clubs in the evenings and on weekends to program for their contemporaries.

5. Creation of "summer school" broadcasting for special groups rather than shutting the station down during the vacation period.

6. An experimental "homework clinic" utilizing telephone communication between program and listener, with a panel of pupil and teacher "experts" in the studio, and directly keyed to classwork, for broadcast during the evening.

STATION PROFILES

The following profiles are designed to illustrate the range and type of educational radio stations operating throughout the country. This cross-section has been chosen by geography, type of licensee, function, size and nature of service.

THE STATE-WIDE NETWORK

The Wisconsin State Broadcasting Service

The Wisconsin State Broadcasting Service, the only state-wide educational radio network in the United States, illustrates how radio can be used by a major university to share its resources with the people of an entire state. It reflects the University of Wisconsin's role as a land grant institution whose obligations extend beyond the enrolled student body to the total state population.

The service consists of two AM stations, WHA, Madison, and WLBL, Auburndale, plus nine FM stations established over the years from 1947 to 1965. Together they cover 95% of the state. The key station is WHA, whose licensee is the University of Wisconsin. The licensees for the other stations in the network are the State of Wisconsin jointly with the State Radio Council.

The State Radio Council was created by the 1945 Wisconsin legislature to "plan, construct and develop a state system of radio broadcasting for the presentation of educational, informational and public service programs." The legal governing body of the network, the Council consists of representatives from the University of Wisconsin, the Governor's office, the State Superintendent of Public Instruction, the State University Board of Regents, the Board of Vocational, Technical and Adult Education, and three citizen members.

A program coordinator is budgeted within the State Radio Council. His function is to canvass other agencies and institutions, citizens groups and community leaders concerning use of the network for public service.

Weather Report Roundups

All stations transmit the same programs simultaneously without the use of land lines. Programs are relayed by pickup and rebroadcast from one station to the other around the loop, in hops ranging from 26 to more than 100 miles. Programs can be fed into the network from any of the transmitter positions. This ability is kept operative by daily weather report roundups from all stations, of particular interest to traveling salesmen, field workers, fliers and other persons who have to move about the state. But except for this weather roundup, and occasional emergencies, all programs originate from the campus studios of WHA, Madison.

The Wisconsin State Network provides the state with many hours of radio services. The nine FM stations broadcast 15 1/2 hours on weekdays, four hours on Saturdays, and 13 3/4 hours on Sundays. The two AM stations broadcast 10 hours on weekdays, 15 1/2 hours on Saturdays and 13 3/4 on Sundays.

Money for operations comes from state general funds, part of which are channeled through the university to run WHA, and the other channeled through the State Radio Council to operate the network. The 1966 payroll for radio broadcasts covered a fully professional staff of 40 full-time and 22 part-time employees.

WHA began broadcasting on a scheduled basis as early as 1919 under the designation, 9XM. Broadcasting activities are centered at Radio Hall, which includes four studios, control rooms, shops, recording laboratory, music library, offices and a reception room. Permanent program lines connect WHA with pickup points on the campus, the State Capitol, the U.S. Weather Bureau and other Madison stations. WHA has an advisory board of eight members of the university faculty who meet monthly.

Staff Creates Most Programming

The largest percentage of programming originates through WHA staff efforts and the talents of University of Wisconsin personnel. Mr. H. B. McCarty, who has been director of radio and television at the university for many years and executive director of the State Radio Council, says:

"We've been blessed from the very beginning by the willingness of the faculty to participate and never once has the question of compensation or fee of any kind arisen. I think this may stem from the generally held conviction that we're all working for the State and the good of the people, and the professor who puts that old wall around himself and serves only the relatively few students who enroll in his courses is not doing his job completely. At present we're broadcasting six 'College of the Air' courses. This means that six professors have permitted us to place our instruments in their classrooms and have put aside the whole idea of the sanctity of the classroom."

Wisconsin School of the Air

Since 1931, WHA has broadcast the "Wisconsin School of the Air," presenting some 13 programs a week for use in elementary and junior high school classrooms. According to the number of teacher's manuals that are purchased for these programs, the School of the Air is reaching more than 300,000 pupils who hear an average of 2 1/2 programs per week.

"The Wisconsin School of the Air" presented 15 different series in 1965 for elementary and junior high school classrooms: a major feature was its regional music festival held in five different towns before a total of 4,250 participants. As part of the series, "Rhythm and Games," a "Careful Club" was organized which enrolled 5,000 children in primary and kindergarten grades.

All of the radio school programming is considered enrichment rather than direct teaching. It is intended to be supplemented by the classroom teacher both before and after the broadcast.

In addition to the "College of the Air" and "School of the Air," the Wisconsin State Network provides a vast array of other services such as: homemakers, farm and music programs, news and special events, political broadcasts, weather information, "Teacher Time," the substance of which are reports and discussions of interest to teachers and parents. The Network's "Political Education Forum" gives free uncensored time to all qualified primary candidates as well as those for statewide offices.

Program materials for the farm programs originate largely with the College of Agriculture, but other agencies such as the State Board of Vocational and Adult Education, Department of Agriculture, the U.S. Soil Conservation Service and the Agricultural Stabilization and Conservation Service also contribute, as well as a number of farm groups.

About 50 hours of fine music are broadcast each week. These consist of music from WHA's great library, faculty and student recitals and those of civic music groups.

Multiplexing Plans

The network recently installed an SCA (Subsidiary Communication Authorization) system, whereby highly specialized programming can be carried "piggyback" over the regular FM broadcasts. This SCA multiplex system has begun operations with third-year French and Spanish for high schools in the state that lack this instruction. SCA opens up a whole new world of specialized services for people with common interests. For example, the university's extension law department last fall presented two courses for Wisconsin lawyers, using a telephone network to reach them throughout the state. In the future, this probably will be done through the SCA hookup, which is less costly and allows for feedback from the participants. Such a system also might be used to present college courses for credit -- perhaps help to ease the teacher shortage by a series for women with B. A.'s who would like to work toward their teaching credentials while at home.

10,000 Letters and Cards a Year

One of the ways the station determines the needs of its service area is a weekly program of letters from listeners, according to Mr. McCarty. This has been presented for more than 20 years and out of it have come thousands of program suggestions. In the last year, the station received some 10,000 letters or postcards, 5,000 telephone calls and 3,000 visits from listeners.

As part of its service to the community, the network has carried programs provided by such organizations as the Wisconsin Chapter of the Association for Better Broadcasts, League of Women Voters, PTA, State Medical Society, Wisconsin division of the American Automobile Association, plus numerous local, state and federal government agencies. In addition, it carries the programming of the NER Network; over the years it has been one of NERN's principal program suppliers. Future plans include an increase in provocative programming designed to motivate more listener participation in public affairs. "Listening is not enough," says Mr. McCarty.

Controversy - The Hope of the Future

In a recent speech at the University of Hawaii, he stated, "Educational radio has moved into fields of conflicting opinions and attitudes, into subject areas of great controversy. This, it seems to me, is a sign of real maturity, and it is this aspect of educational radio -- its courage and daring -- which gives me most hope and assurance about its future."

A LIBRARY STATION

WFPK-FM and WFPL-FM, Louisville, Ky.

WFPK and WFPL, FM stations, licensed to the Free Public Library of Louisville, Ky., are vivid, current, illustrations of the great social potential of the audiotape repository. In addition to their daily broadcasts over the air, they provide material from their aural archives via closed circuit phone lines. These lines go to 13 branch libraries in the Louisville system, plus the University of Louisville, Belarmine College, Catherine Spalding College, the General Hospital of Louisville, the Kentucky School for the Blind and two local high schools.

The library has a listing of 100,000 programs which are on tape and may be put on a closed-circuit wire at the request of any individual. The stations have been gathering tapes since 1951, and have amassed one of the largest collections in the country. Included are the Metropolitan Opera programs and the CBS documentary series, "You Are There."

Asking and Receiving

There are 30 closed-circuit lines in all, and some institutions take more than one. The University of Louisville, for example, takes ten lines, half of which are connected with the university library where students have direct access to them. Students may be assigned programs as part of their courses. It might be a Carl Sandburg record for an English class, tapes of a professor's lecture series, examples of a composer's work for a music appreciation class, and so forth. The wires work both ways, so those who have them can ask questions as well as receive information.

Music is the main programming category supplied by wire to the General Hospital. There is a direct line into the psychiatric ward to provide musical and recreational therapy. The Kentucky School for the Blind also uses the wire material extensively. The catalogue of tapes has been duplicated in Braille for the children.

Individuals not connected with the subscribing institutions can go to the city's libraries and put on earphones to hear their personal selections via closed-circuit. Children's programs are sent by wire to the libraries to stimulate interest in reading. Among such programs are interviews with the authors of children's books.

Miss Dorothy L. Day, manager of the library stations, estimates that 26,000 children use the wire system in the libraries. She also estimates that the total closed-circuit system has 150,000 listeners.

Potential for Job Training

The staff of the public library system is served by the closed-circuit lines with reviews of new books, interviews with authors and other information. The University of Kentucky also has an arrangement with the libraries whereby professors teach courses via closed-circuit to the branches. The courses usually are in the humanities or social sciences. At one time the Unitarian Church used the telephone system to train church workers in child guidance. In some cases the tapes have provided the sound for silent films on the subject.

This closed-circuit system has great potential for work with special groups and minorities. All kinds of training could be made available in the library branches: for children, parents, the jobless, semi-literates, and so on.

Miss Day said the tape collection is so extensive that both former Presidents Truman and Eisenhower made use of its materials to get their own presidential archives under way. As an indication of the depth of the collection, she aided a professor at the Kentucky School for the Blind who obtained a master's degree in literature by listening to the library's aural resources.

Miss Day emphasizes, however, that the library system is not primarily concerned with formal education, but in having its resources used by people who have no connection with schools, people who are hungry for information.

Two On-Air Services

The on-air broadcast service of the two stations also is considerable. WFPL, which has been in operation since 1949, broadcasts from 9:00 a.m. to 10:00 p.m., while WFPK, which started September, 1954, broadcasts from 8:45 a.m. to 11:15 p.m. Both operate seven days a week. On WFPK, "The School of the Air" is broadcast from 9:00 a.m. to 2:00 p.m., followed by music until closing. WFPL offers music from 9:00 a.m. to 2:00 p.m., and then spoken-word programming until sign-off. However, WFPL also offers a music program from 5:00 to 7:00 p.m. for use by the University of Louisville. The music is selected from the stations' 30,000 commercial records for assigned listening by students in the music history department.

All programs presented on both WFPL and WFPK are repeated seven times, either each day within the same week as with talk programs, or once a week in a staggered sequence over a seven-week period.

The school programming is planned by the Board of Education of Jefferson County, in which Louisville is situated. It also is used in the seven counties surrounding the city.

A METROPOLITAN AREA STATION

WRVR New York

In October, 1966, WRVR, a six-year old FM station licensed to the Riverside Church in the Morningside Heights area of Manhattan, undertook an ambitious experiment in international understanding. For a full month, they aired one complete day's schedule of the broadcasting heard in another foreign country each day. It is with such imaginative programming that WRVR has achieved an unusual amount of national attention. In 1965 it received a George Foster Peabody Award, the first Peabody Award ever given to a radio station as a station.

Listeners may hear jazz recordings along with the entire repertoire of Arturo Toscanini's performances, actuality reports from scenes of civil rights strife, a precedent-shattering series on homosexuality, and a wide range of lectures and discussions about art, politics, science and topics of general interest. These, of course, are in addition to concerts of sacred music and church services, both of which account for only nine per cent of the total schedule.

To cover the broad community canvas, WRVR is on the air from 7:00 a.m. to just after midnight five days a week, and a few hours more on weekends.

WRVR has remote equipment which it uses for coverage of news and cultural events throughout the New York area, and sizeable studio facilities (the largest can seat 800 for a full symphony concert) which enable it to air and tape much of its "live" schedule with relative ease. Studios at The Riverside Church last year held four 90-minute discussions on disarmament, an hour examination of a "Harper's" magazine article on "The American Nun," and 13 two-hour programs for children. The remote facilities came into play for a two-hour discussion of "Marat/Sade," taped with the cast, director, producer and members of the audience at the St. Mark Playhouse, and for broadcasting a huge variety of after-dinner speeches, presentations and the like.

As an integral part of a living and active community, WRVR calls upon its neighbors -- Columbia University, Juilliard School of Music, Jewish Theological Seminary of America, and others, for program contributions. It airs programs from major educational institutions in the United States. the NER Network and from organizations throughout the world. In turn, WRVR programs have been heard on more than 200 stations in the United States and abroad, on the Voice of America, the Armed Forces Radio Service, and eight foreign networks.

In a year's time, the station reports that it receives about 25,000 pieces of mail and 20,000 phone calls pertaining to its program choices. Audience reaction is the management's chief guide to future programming decisions. During the ten weeks that WRVR broadcast its series on homosexuality (non-sensational interviews and discussions), it received only a few letters, but almost all were favorable. Additionally, a number of doctors and individuals requested tapes of some of the programs.

From the reaction to this series, management concluded that WRVR's audiences "generally react favorably to broadcasts in any content area, provided the method of presentation goes beyond the usual glib surface levels, avoids tabloid sensationalism, excludes pseudo-authorities, and affords all minorities the best available spokesmen to represent their opinions."

Mail and phone response is used to gauge the characteristics of the WRVR audience (size of the audience is not a primary concern). Those characteristics indicate the station is cutting across the educational, age and income groups that make up the residents of nearly any large city today.

Twice in the last few years, the station has suddenly found itself with an "image." The first instance took place when it began running a six-part documentary on the civil rights flare-up in Birmingham. The series was turned out by a three-man team, largely on the scene in the Alabama city. So powerful was the documentary that the station was quickly recognized as "the integration station of the nation." Again, during an International Convocation on World Peace in New York, WRVR cancelled all regular programming for four days and carried the sessions of the Convocation live. Listeners tuning in during the period might readily have assumed the station had turned solely to the fostering of world peace.

A REGIONAL AM DAYTIME STATION

KSAC Kansas State University, Manhattan, Kansas

When dozens of commercial radio stations use an educational outlet's programming the reach and value of that programming is multiplied many times.

Such is the case with KSAC, licensed to the Kansas State University of Agriculture and Applied Science in Manhattan, Kansas. Taped programs produced at KSAC are rebroadcast by approximately 60 other stations throughout the area. The majority of these stations are commercial.

Just how extensive is the part played by KSAC in the program schedules of other stations is revealed in the fact that the Kansas State University outlet distributed 50,000 separate tapes last year. Five years ago, when the station began expanding its tape service, the annual total was about 6,500 tapes. Some 19 weekly series are produced, with the number of episodes ranging from one to five per week, and the length of each show ranging from two-three minutes to a half-hour. (One series, "Homemaker's Memos," consists of 20-second and 60-second spot announcements highlighting items of interest to homemakers.)

"This Week in Agriculture," a five-minute report, and "Farm Talks," two or three-minute talks on timely topics, are regularly used by 35-40 stations. An outdoor sports program, "Kansas Afield," is used by about 30 stations to fill 12 1/2 minutes of airtime each week. Another 20 stations subscribe to the KSAC "Special of the Week" series, in which topics such as water and air pollution, and a variety of current events, are covered.

A station rebroadcasting everything offered in a week by KSAC would be able to fill two- and-a-half hours of time according to station manager Jack Burke. One series, play-by-play from KSU football and basketball games, is sold to other stations "at cost" to pay for line charges. If the network has a surplus at year-end, stations receive a rebate. In addition to the popular agricultural shows many other series are available to stations: investment discussions, tips on grooming, a half-hour music program that features performing talent on the KSU campus, five-minute tips on raising children, etc.

Occasionally, commercial stations will supply KSAC with data on specific projects in their communities--a charity drive, centennial celebration, and the like--and the KSAC staff will turn the raw material into a program. The program is then returned to the original station that requested it, and may be duplicated for use by other stations. "What we're accomplishing," says Mr. Burke, "is the extension, just that much further, of the university and the knowledge we have to offer the state."

Preparation of the tape shows occupies about 30 per cent of the total effort of the small staff. (The university does not use students as unpaid part-time help by way of giving them credit in broadcasting courses.) Because it shares time with a commercial station KSAC is only on the air from 12:30 to 5:15 p.m., Monday-Friday, and a few hours on Saturday afternoon. Thus, the staff can concentrate on programming of interest to the community, without relying on recorded music material to round out a long broadcast day. A daily classical music program offers 90 minutes of recorded performances interspersed with live broadcasts of the Kansas State University Resident String Quartet and similar groups.

Besides numerous university organizations which participate in programming, the local library association, civic theatre, garden club, Rotary, and a dozen other groups were involved in the production of programs last year. State and government officials, along with representatives of other nations, are interviewed on the weekly half-hour "Perspective," which discusses Viet Nam and family planning at one time and whether schools should limit the wearing of "granny dress" at another.

The station relies heavily on listener response in formulating its program plans, but also keeps "in tune" with population and educational trends, as well as regular contact with community leaders. Some 2500 letters received last year contained 700 comments on programs, says Mr. Burke, almost all of which were favorable. As an example of a program changed to appeal to today's listeners the station manager noted that until a few years ago, the daily homemaker's program was a half-hour devoted to recipe and household hints. Today, the housewife is known to have wider interests.

The program was split into two parts: the first deals with running a household to include estate planning, economics, thrifty shopping, etc.; the second consists of 15-minute interviews with experts in psychology, aiding the handicapped, school problems, and so on.

The station feels its role in the community and the state is particularly vital in that Kansas has no in-school stations or educational television. It plans to increase its service with multiplexing that would enable it to expand its agricultural efforts with programs of interest to veterinarians, feed dealers, livestock suppliers and others with special interests. Another area of future expansion, says Mr. Burke, is in social welfare programs, self-help series that would aid people in bettering themselves, their families' and their neighbors' lives.

A PUBLIC SCHOOL STATION

KBPS-AM Portland, Oregon

Any business that had to face a 75 per cent turnover in its labor force each year certainly would find itself in difficulty, but radio station KBPS Portland, Oregon, faces that situation regularly and still manages to provide remarkable service to its community. The reason for the turnover is that the bulk of the station's staff is made up of students in the city's public schools system. The station had its beginning in 1923 when the Benson Polytechnic High School bought a station to train pupils in radio; 44 years later the facility has grown from a training ground to a vital educational force.

On the air from 9 a.m. to 9 p.m. each school day, KBPS airs in-school programs for both elementary and high schools, and then fills the afternoon and evening with adult fare and special programs for schoolteachers.

Because so much of its staff is made up of students (the station has a full-time staff of four, plus three secretaries), KBPS is uniquely suited to know what is of interest to the young at all times. Representatives from all 107 Portand schools participate in the programming schedule, acting as reporters on "Hi News and Music," a nightly quarter-hour of news from the high schools, or serving as sports announcers, furnishing ideas on music programs, etc.

The in-school schedule of KBPS currently consists of 68 different series for all grades. Everything from books to music, news to science, geography to history, and many more are topics covered in 15-minute broadcasts throught the school day. Late afternoon and evening programs run longer (a half-hour or hour) and appeal to older children and adults. For them KBPS carries such series as "At the Art Museum," "Opportunity without Taxation" and "Oregon Shakespearean Festival."

One of the most demanding tasks that faces KBPS, other than creating the largest part of its 12 hours of daily programming, is that of coordinating its schedule with that of schools and teachers throughout the area. Mimeograph machines and telephones are continually in use, supplying radio-TV coordinators at each school with data on upcoming programs. "Flash" words must be provided on special programs that are hurried to the air in order to tie in with important local events. Once a year, the coordinators are called to a meeting to evaluate the station's programming services, and to furnish ideas for future broadcasts.

Everyone Plays a Part

The daily in-school series are planned by teachers and supervisors, but professional people and community leaders, as well as local civic groups aid in planning the after-school programs. A recent series of broadcasts on "The Challenging Years" was developed to meet the listening needs of the area's senior citizens, and student reporters armed with tape recorders roam the city to uncover sound-stories that will provide intriguing and informative programming. But, aware that a world outside Portland exists, KBPS carries various series from NER ("Report from Mainland China," "The Prospect for Southeast Asia," etc.), as well as from the commercial stations in the city and educational outlets elsewhere.

Understaffed (the full-time staff is on hand much of the 12-hour broadcast day, running the station as well as instructing the student engineers, announcers, etc.), and operating on a small budget, KBPS has been forced to function without a newsroom and other necessities. Still, its 44-year history alone is a testament to the value of its services, and the station hopes to increase its power to spread those services over a wider area.

LISTENER SUPPORTED RADIO

The Pacifica Stations
KPFK San Francisco, KPFA Los Angeles, WBAI, New York

Well known because of their controversial nature, the Pacifica stations KPFA Berkeley, California, KPFK Los Angeles, and WBAI New York are uncommon for several reasons: together they cover about one-eighth of the country; their entire operation is listener-supported; and they provide a quality of service of unusual depth and range.

Pacifica has the largest audience potential of any educational radio station operation in the country. In California there are 4,405,795 people in the KPFA coverage area, and 8, 953,589 in the KPFK coverage area--- a total of 13,359,384 in a state with a population of 15,717,204. In the New York metropolitan its coverage area embraces an estimated 14,114,927. Average estimated FM set penetration in these areas is between 50 and 60%.

The Pacifica Foundation, an educational non-profit corporation, does not provide funds for operations. The listeners do. Money is raised in each area by annual $15 subscriptions to program guides, supplemented by contributions above these subscriptions, and by occasional bequests and grants. Money for capital expenditures has been difficult to obtain, and in 1966 borrowing for capital purposes was necessary.

Pacifica finds part of its mission that of giving time to little-known and, in many instances, unpopular causes. To illustrate, "Why I Am An Atheist", an anti-war rally in Oakland, "Reminiscences of a Rebel", and a program titled "The Censors Close Down the 'Beard'".

It has broadcast programs about such esoteric subjects as Little Magazines, psychotherapy for the middle classes, and amateur radio. Controversial playwrights have been given a platform, and all the arts have been reviewed, and discussed.

Its commentator series consists of a quarter-hour program, following the news, which gives spokesmen for popular or unpopular causes a chance to present their views. They can be from the John Birch Society, or the Maoist wing of the Communists. Often it seems as if controversy is the breath of life to Pacifica. Speakers with strong viewpoints are not always balanced by their opposites. Pacifica's bulletin explains: Sometimes a one-to-one balance is not even desirable (for example, an interview is different from a debate). An idea does not always demand its opposite. When an opponent is desired but cannot be found, we will usually broadcast one without the other.

These stations offer one of the longest daily schedules of services in educational radio today---on the West Coast 16 hours daily and on WBAI New York, 19-1/2 hours. They produce an enormous number of locally originated public affairs and community service programs. KPFA alone has an 118 page list of the tapes in its archives of programs it originated (and these do not include its drama and literature programs for which an additional list is to be prepared). The other two stations do not have an archive list, but each collects the tapes of all programs it originates.

One of Pacifica's goals is to establish a central archive system for the three stations, with archives housed in a more fireproof building and with adequate staff to service them. Most of the time there is not clerical staff enough to put the current programs on card index.

If more money were available, community service programming could be expanded by development of sub-carriers at KPFA and KPFK, together with a link station mid-state. These sub-carriers could be used for in-service training (for example, the continuing education program of the University of California Medical Center).

Pacifica has not thus far aimed broadcasts to in-school service. If it is able to do so with SCA in the future, it would most logically serve high schools.

KPFA, KPFK and WBAI all emphasize news. Pacifica news is compiled from AP wire (long version), local and national newspapers and many other sources. The emphasis is on international, national, science, human affairs news, but not "human interest", accidents, gossip, women's world, farm, sports or fashion news.

Needs of the stations' service areas are determined by requests from the community for use of the facilities of the stations to reach the public, and by questionnaires to subscribers and other listeners who ask for them.

It is Pacifica's policy to be sensitive to the needs of minorities. Among the significantly sized minority groups in the stations' service areas are Negroes (in all three areas) Mexican-Americans (especially in Los Angeles), and Puerto Ricans (especially in New York). WBAI currently airs programs in French for the large French-speaking audience in New York.

Each station publishes its program schedule in advance in a folio that goes to subscribers and to others on request. The number of subscribers to each station is: KPFA, 8,000; KPFK, 9,000; WBAI, 10,000. KPFA mails 3,000 folios in addition to non-subscribers; KPFK, 4,000, and WBAI, 4,000. The stations conduct no surveys on size of audience, but on the rare occasions they offer scripts on some popular program, approximately half the people requesting copies are not subscribers.

THE POPULAR REGIONAL STATION

KWSC Pullman, Washington

An educational radio station that draws more listeners than the commercial stations serving its own area is a rarity, but the Barr Electronic Survey for November 1966 showed that KWSC in Pullman, Washington, was doing so in the 7 a.m. - noon period and the 6-10 p.m. period. Licensed to Washington State University, this AM station has obviously found the programming format that meets the needs of a large proportion of area residents. These listeners are concentrated in the cities of Pullman, Washington, and Moscow, Idaho, with combined populations of about 30,000 and three other cities that have another 30,000 residents. Another half-dozen towns have about 2-3,000 people each, and the remainder of the listeners are rural-or farm-based.

Programming is a careful blending of material designed to serve the interests of university students and faculty, the urban dwellers who are particularly interested in events occurring in their cities, and the considerable agricultural population. The farmers are generally prosperous, hold large acreages, and have heavy investments in equipment. Most are college-educated.

Since the Pullman -Moscow area is geographically isolated -- Spokane is 78 miles away and canyons, narrow roads, etc., separate the population centers-- cultural events from "outside" are seldom accessible. KWSC therefore concentrates much effort on broadcasting all available concerts, lectures and guest-artist appearances at both Washington State University and the University of Idaho. Additionally, recorded programming from such sources as the NER Network, the BBC, Canadian Broadcasting Corporation, French Cultural Services, etc, brings concerts, drama, documentaries and other cultural events to listeners.

As yet another source of material, KWSC frequently draws upon the Pullman Community Theatre, community concert associations, the local public schools and libraries, summer play festivals and so forth. Such organizations thus receive an opportunity to deliver their wares to a large audience, and to bolster attendance at their "live" performances or functions.

Basing its programming efforts directly on the audience it serves, and on the assets and deficiencies of its area, the station pinpoints its news programming on a severe deficiency, according to its manager, Burt Harrison: the facts that two daily papers have limited circulation outside their metropolitan areas and that the five commercial radio stations do little local news and confine their general newscasts to brief summaries. The KWSC news staff has a full-time news and public-affairs director, a part-time weather editor, and 12-16 part-time reporter-editors who are advanced students in the station's professional broadcasting training sequence.

The sizeable staff, backed by AP and UPI wires, portable tape gear, 26 phone circuits, etc., prepares eight 15-minute newscasts per day (two of which are devoted to local and regional happenings). Additionally, numerous special news events--political meetings, fires, legislative reports, year-end reviews--are carried or reported as they occur.

A special four-man staff prepares nine weekly farm broadcasts, plus special coverage of soil conservation meetings, district fairs, and lectures on the college campus. Since KWSC came on the air 46 years ago, it has formed a vital communications link between the agricultural divisions of Washington State University (a leading center of farm research) and farmers in the area.

Whenever management spots a void that the station can fill, KWSC usually tries to fill it. A small example is a 15-minute daily morning series "Barter Bureau", providing want-ad and swap- shop items. (Scarcity of newspapers dictated the format.) The series averages 65 letters and phone calls a week. Another "service" program which is "flooded" with requests is "Luncheon Date", a daily quarter-hour report on the doings of civic and social groups throughout the 11-county area. "Civic leaders are not bashful about making their wants and desires known to us", says Mr. Harrison. "They've been encouraged to do so for 46 years."

Filling some 17 hours of airtime daily--with everything from wake-up music to the Metropolitan Opera broadcasts, from a Japanese press review to children's "The Story Lady"--calls for a large staff. Full-time professional management and supervisory personnel number nine (although more persons than that are actually utilized by the station, but also devote part of their time to the Washington State University TV station, KWSC-TV, and the university itself.) About 30 part-time employees work an average of 10 - 12 hours per week at a minimum pay-scale; these are primarily radio-television students enrolled in the university, and are used as announcers and members of a junior executive staff. A dozen other students work without pay as Class "C" announcers, and 15 - 25 news editors and copywriters work for the station as part of their laboratory assignments in broadcast news/copywriting classes.

Aware that in a real world "you can't please everybody all of the time", KWSC notes that about 85 per cent of 7,000 letters and phone calls received during the past year were favorable toward its efforts. Management is in almost daily contact with the mayor and other officials of Pullman and Moscow, and in weekly or frequent contact with social and civic leaders in most of the smaller towns it serves. Nearly 3,000 copies of a monthly program listing are distributed to officials, civic organizations, school and listeners requesting it.

KWSC's programs are used by more than 100 other stations, both commercial and educational, in an area reaching from Spokane to Salt Lake City and Reno, Nevada.

To broaden its coverage, the station plans to move its transmitter site and install a new transmitter and tower this summer. Long-range plans include the addition of FM with multiplexing and possible FM satellites to match TV satellites in Walla Walla, Yakima and other markets.

More newsroom space is needed to relieve overcrowding, says Mr. Harrison, and an expansion of his professional staff would enable the station to realize its goals even more effectively than it does now. Those goals were outlined by the station's first director in 1922: "To give informing, interesting, educative and timely broadcasts to the people; to facilitate research, invention and technical progress; to convey to the Northwest the knowledge and intellectual service of a faculty whose literary, scientific, technical and philosophical interests comprehend the entire field of learning; to train young people in the use, operation and human service of radio."

A COMMUNITY-MINDED STATION

WBFO Buffalo, New York

A station which believes in "overextending its capabilities and then trying to catch up," WBFO Buffalo, N. Y., licensed to the State University of New York is noted for the emphasis given to community affairs, especially Negro and minority problems. Last year WBFO aired five major productions which display its interest in reaching out and embracing its total community.

These include "To Be A Negro," "Discriminating on Discrimination," "Buffalo Urban League: Report," Nation Within A Nation," and "Focus on Foods." The station has broadcast the University Convocation lectures which have dealt with civil rights and mental health issues arising from urban pressures. In the "Buffalo Community Report" time has been given to the Negro Adoption Agency, the Community Action Agency and the Citizens for Better Education.

This station is one of the few to do research among minority groups in the community. For its "Focus on Foods," produced in cooperation with the American Dairy Council, William H. Siemering, the manager, went into the low-income "fruit belt" of Buffalo to conduct a "porch-to-porch" survey. He spoke to 60 Negroes. This 1964 survey disclosed that 57 per cent of the respondents had FM sets and that 32 per cent listened to WBFO. Of the group, 95 per cent were interested in a program on health information, and 70 per cent on how to spend money wisely. Unfortunately, "Focus On Foods," which was directed to women who wished to prepare nutritious low-budget meals, did not fully succeed, perhaps because it was not promoted well enough, according to Mr. Siemering.

WBFO also broadcast the proceedings of the city's "Model City Conference" which took two days to cover a wide variety of issues relating to urban matters. Along much different lines, the station has experimented with new aural concepts, such as its "Radiovision." Reproductions of student paintings appear on the cover of the station's program guide. Professors and students at the University of Buffalo discuss the paintings on the air.

The station's audience continues to grow. It has a circulation of 5,500 program guides each month, and new requests come in daily.

WBFO also produces "The State of the University," which is syndicated to 56 stations throughout the state, most of them commercial outlets.

A MIDWESTERN CULTURAL FORCE

WUOM Ann Arbor, Michigan

That an education radio station can become a vital cultural force in the life of the region it serves is demonstrated by WUOM-FM Ann Arbor, which with its satellite in Grand Rapids, WVGR-FM, are licensed to the University of Michigan. The stations broadcast from noon until 11 p.m. seven days a week. Filling more than 75 hours of airtime weekly calls for the help of local civic organizations, officials and schools -- in addition to a large full-time professional staff (about two dozen persons) and 16 part-time workers.

For this major midwestern institution of higher education, WUOM and WVGR mean a great deal more than a "classical juke-box". Significant community issues, both local and regional, as well as the whole range of national and international events, have become an increasingly important part of the service rendered to Michigan's citizens in recent years. Weekly airings of City Council meetings, live coverage of urban renewal public hearings, regular program series involving the decision-makers in education throughout the community, daily short-wave broadcasts from many capitals around the world, special documentaries touching on various aspects of American life, and full length productions of classical drama, are all representative of the multi-faceted philosophy of this midwestern "cultural force".

Under a grant-in-aid from the National Educational Television and Radio Center, in cooperation with the National Association of Educational Broadcasters, WUOM produced a full classical drama series--six full-length radio productions of Greek and Roman plays in modern English translation, with original music especially composed for the series.

Each program was introduced by a noted classical scholar. The programs vary in air time from one hour to nearly two and a half hours. The dramas included: "Iphigenia at Tauris" and "Orestes," by Euripides; "The Brothers" by Terence; "The Birds" by Aristophanes; "Philoctetes" by Sophocles, and "Seven Against Thebes" by Aeschylus.

More than 55 per cent of the programming time of WUOM is filled with the sound of music. As the university has one of the largest schools of music in the country, the station broadcasts numerous live performances in addition to recorded concerts and music-instruction programs. But others, beyond university students and faculty, are sought out in the effort to make the stations truly a part of their coverage area.

For example, WUOM recently carried 13 one-hour programs that featured music organizations representing as many high schools in the area. Heard in the series were the schools' bands, glee clubs, orchestras, student soloists, choruses, vocal groups and small ensembles. Some 3,000 high school musicians participated in the programs, which were carefully chosen to present a cross-section of communities of various size and music-instruction activity. The participating schools were furnished tapes of their performances for library and study purposes.

Another music project of the stations certainly worthy of note is "Festival of Song," a half-hour twice-weekly series that has been broadcast for 16 years, and is utilized in over 200 elementary schools throughout the state as a regular course of instrucion in vocal music, folk dancing, part-singing and music appreciation. For the teacher in each school, the University of Michigan Broadcast Service provides an instruction manual. The teacher is given lesson plans keyed to the individual broadcasts, and is instructed in the use of simple instruments, dance steps and so on. At the end of the "semester," the stations send the six-member production staff (the "teacher," announcer and quartet of advanced music students) on a 2,300-mile tour of the state. Purpose of the tour is to meet some of the 80,000 children who have listened to the radio series face-to-face. In 12 cities throughout Michigan, live "Festivals" are conducted in which the youngsters demonstrate to the radio staff, their parents and their friends what they have learned. Participating in each live Festival are choruses of children that can number anywhere from 500 to 2,500. The WUOM original broadcasts are carried on 25 other stations, so virtually every school in the state is within range of the series.

As important as music--ranging from jazz to classical, "musica antiqua" to folk--is in the WUOM schedule, other university departments are also called on frequently. Edwin G. Burrows, station manager, stresses the station programs the kind of radio it can do best. "On our campus," he says, "we have one of the major medical schools and one of the major law schools in the country; therefore, we do a considerable amount of programming in those areas."

Specialists on the station's staff are the news and sports editors and the music director. Where many commercial radio stations carry news in capsule form, WUOM has long aired one-hour newscasts at both noon and 5 p.m. The sports director is kept busy covering general sports activities, and the numerous athletic events at the university itself.

The university faculty is called on regularly for panel discussions and interviews, with topics ranging from politics to art, history to disarmament, etc. From the Department of Speech come adult plays and children's stories. Behind all the programming effort, of course, is the desire to give a great many listeners something that is not provided by the commercial stations in the immediate area (and in Detroit, 50 miles away).

The total number of potential listeners in the area comes to more than six million, of which 10 per cent are Negro; about five per cent are Canadians living in the U. S. These minority audiences are also considered in WUOM program plans, as with "New Sounds from the South" a series taped in Mississippi, dealing with changing attitudes on civil rights. Of 3,000 pieces of mail and 750 phone calls received annually about programming, reports Mr. Burrows, virtually 99 per cent are complimentary. Approximately 14,000 program schedules are distributed each month. Occasional "voluntary" surveys printed in the guides provide management with audience reaction.

Audience approval is always welcome, of course, but the station makes no deliberate effort to appeal to the widest possible audience; rather seeks to make something available of value to every segment of the total. Thus, the listener who doesn't care for "Law in the News" may care for "Human Nature in City Planning" or "Folk Music of the Americas." The serious student will listen willingly to 30 classroom lectures on "Modern Southeast Asia" by a history professor, while teen-age basketball fans will tune in an hour documentary, "The Cassie Russell Era."

Many other stations, both commercial and educational, carry WUOM programs. Last year 65 NER stations carried a 13-part series celebrating the Sibelius Centennial; 80 stations carried 52 "Special of the Week" productions; 50 carried 52 episodes of "Business Review" etc. These stations were located throughout the country. Within the state of Michigan, 100 stations were furnished with a total of 300 tapes each week on such series as "Medical Report," "University Organ," "Rx for Health," "Conservation Report" and 20 others. Additionally, anywhere from two to 25 stations often join in regional networks to carry football, basketball, concerts, etc., fed by WUOM.

Not all programming, of course, is developed on-campus. The station works with the Civic Theatre, Humane Society, Greek Theatre, Optimists and other local civic organizations for various productions. The Michigan Heart Association and the Voice of America were just two of the regional and national groups that were involved in WUOM programs last year.

WUOM looks toward a future in which it can expand its broadcast day and widen the variety of programming offered. In its plans are stereo equipment and addition of personnel to specialize in different kinds of programming and the development of services to specialized audiences through multiplexing.

PROFILES IN BRIEF

A Ten-Watter -- WMKY Morehead, Kentucky

Located in the foothills of the Cumberland Valley, the low-powered WMKY Morehead, Ky. divides its attention between the students of Morehead State University and residents of the lumber town. There is only one commercial station in town; the 10 watt university-owned station has cooperated with the commercial outlet by providing it with coverage of the ground-breaking ceremonies for the new Cave Run Reservoir. To alert the community to the problem, WMKY broadcast a documentary on the water shortage. Among other special features: student's debates; faculty reports on their research projects; foreign relations discussions with leading government figures participating, and concerts, including some from the Metropolitan Opera.

Looking toward the future, WMKY hopes to become more involved in matters of particular concern to the Appalachian region. One such remote program would go to a small valley community where the people have tried to solve the unemployment problem by starting a small canning operation. This program would show how they are doing with their self-help projects. Another prospective series will follow commodity agents and tape interviews with them as they make their rounds.

A Diversified Community Service -- WSIU Carbondale, Illinois

The variegated schedule of WSIU, the FM outlet of Southern Illinois University at Carbondale, programs everything from jazz, to the Metropolitan Opera to a community forum for "unpopular notions." The basic idea: to give listeners services not provided by other area broadcasters, commercial or educational.

In the news area, where there is nighttime competition only from one commercial AM station, WSIU sends reporters to City Hall, the mayor's office and to community meetings, and expects them to come back with the full story. "The Morning Show," modeled after "Monitor," mixes quality popular music with information, interviews and news. Through the broadcast day, popular and concert music are used to lure listeners to tune in for more substantive fare. "Negro Music In America," with Tony Lueckenbach introducing rare recordings, is serviced on tape to other stations. On the planning boards: credit courses in the American novel and in music appreciation. Also under consideration -- a special program to give WSIU's listeners an opportunity to tell the station what they would like it to do.

A High School Station -- WNAS New Albany, Indiana

High school students operate WNAS New Albany, Indiana, which is licensed to the New Albany-Floyd County Consolidated School Corp. Three candy machines in the New Albany Senior High School help support this station, which also serves the more populous area of Louisville, Kentucky. The station cuts back to a twice-weekly nighttime schedule during the summer months when the children are on vacation.

Broad public service with emphasis on news is the aim. Special attention is given to the activities of the city government. There are discussion programs on major local issues. A beeper phone allows listeners to call in and talk to featured guests. "Community Chronicle" covers social events and civic activities. From 1 to 3 p.m., the service turns instructional, with courses for first to sixth graders. "Spell-Around," a half-hour spelling contest, takes advantage of the youngsters' competitive spirit. A geography series won a Golden Mike Award from the American Legion in a competition that included commercial stations. WNAS has such an acceptance in the community that last year Senator Birch Bayh agreed to let a student newsman accompany him and report on his travels throughout Indiana.

A Cultural Resource for A Region -- WUOT Knoxville, Tennessee

WUOT Knoxville, concentrates on providing East Tennessee listeners with the kind of cultural, informative programming that, for the most part, is not available to them on the 25 area commercial stations.

Major attention is given to classical music. Programs of records are selected and annotated by a University of Tennessee music professor. Library of Congress tapes are aired, as are tapes of the New York Philharmonic Orchestra concerts. The Metropolitan Opera is broadcast live. Also on the schedule: contemporary jazz and Broadway show music.

The University of Tennessee station offers serious dramas from outside sources; an array of lecturers; analyses of state and national problems by faculty experts; commentary on domestic and foreign affairs by outsiders; news on scientific developments; foreign press reviews from Israel, France, Japan, England, Germany and Canada, and French lessons.

This 17-year-old station has sought to establish itself with listeners as the spot on the dial where they can get fine music, great drama or ideas beyond the range of the commonplace.

A Municipally-Owned Station -- WNYC New York, New York

An educational station with a distinguished history, the municipally-licensed WNYC-AM and FM in New York City got its start 41 years ago. In its long and eventful career, among many fine programs, one in particular still stands out for uniqueness and for sheer humanity: Mayor Fiorello La Guardia reading the comics in his high almost quavering voice to the children of New York City during the newspaper strike of 1945.

Today, the AM station presents a wide blending of programs; the FM stations offer primarily music. It is interesting to note that "The Masterwork Hour," long a model for classical music programs still continues on the AM station because of requests of the AM audience.

WNYC-AM still concerns itself heavily with community services. Its news programs feature neighborhood events from many localities in the metropolitan area, and editorials from 12 different local newspapers in New York City. "Listen To Nutrition" offers the latest information on the prices of food, with specific attention to those products which are less expensive because they are in great supply. The N.Y.C. Department of Health discusses "You and Your Health". Young talent from the Police Athletic League is heard on "Pals of the P.A.L." Weather reports are aired directly from the municipal weather service.

The director of Radio Communications, Seymour N. Siegel, is working on two future projects in which his stations may be involved. He is hoping to do a program about pre-natal care for expectant mothers which would be broadcast to laundromats, particularly in low-income areas of the city; and to produce a monthly staff meeting of the New York City Welfare Department administrators which would be beamed to its 20,000 employees in welfare offices. Both would have to be done through multiplexing.

The municipally-licensed radio operation is also well-known for the complete coverage it gives UN affairs.

EDUCATIONAL RADIO STATIONS IN THE UNITED STATES

State	City	Licensee	Call Letters
Alaska	College	University of Alaska	KUAC(FM)
Arizona	Phoenix	Phoenix College	KFCA(FM)
Arkansas	Conway	Board of Trustees, Arkansas State Teachers College	KASC(FM)
California	Arcata	Humbolt State College	KHSC(FM)
California	Berkeley	Pacifica Foundation	KPFA(FM)
California	Claremont	Pomona College	KSPC(FM)
California	La Canada	La Canada Unified School District	KUNF(FM)
California	La Sierra	La Sierra College Broadcasting Company	KSDA(FM)
California	Loma Linda	Loma Linda Educational Broadcasting Corp.	KEMR(FM)
California	Long Beach	Board of Education, Long Beach Unified School Dist.	KLON(FM)
California	Los Altos Hills	Foothill College Dist.	KFJC(FM)
California	Los Angeles	Pacifica Foundation	KPFK(FM)
California	Los Angeles	University of Southern California	KUSC(FM)
California	Los Angeles	Loyola University of Los Angeles	KXLU(FM)
California	Northridge	San Fernando Valley State College	KEDC(FM)
California	Pasadena	Pasadena Junior College District	KPCS(FM)
California	Redlands	University of Redlands	KUOR(FM)
California	Riverside	University of California Board of Trustees	KUCR(FM)
California	Sacramento	State of California, Sacramento State College	KERS(FM)
California	San Bernardino	San Bernardino Valley Union Junior College District	KVCR(FM)
California	San Diego	San Diego State College	KEBS(FM)
California	San Diego	San Diego Unified School District	KSDS(FM)
California	San Francisco	San Francisco Unified School District	KALW(FM)
California	San Francisco	Simpson Bible College	KCMA(FM)
California	San Francisco	San Francisco Theological Seminary	KXKX(FM)

State	City	Licensee	Call Letters
California	San Jose	State of California	KSJS(FM)
California	San Mateo	San Mateo Junior College District	KCSM(FM)
California	Santa Barbara	Regents of the University of California	KCSB(FM)
California	Santa Monica	Santa Monica Unified Schools	KCRW(FM)
California	Stanford	Leland Stanford Junior U.	KZSU(FM)
California	Stockton	University of the Pacific	KUOP(FM)
California	Torrance	Torrance United School District	KNHS(FM)
Colorado	Colorado Springs	Colorado College	KRCC(FM)
Colorado	Colorado Springs	Colorado Springs Public Schools	KSHS(FM)
Colorado	Fort Collins	State Board of Agriculture	KCSU(FM)
Colorado	Greeley	Executive Officers and Judicial Board of Associated Students of Colorado State College	KCBL(FM)
Connecticut	Bridgeport	University of Bridgeport Board of Directors	WPKN(FM)
Connecticut	Fairfield	Sacred Heart University	WSHU(FM)
Connecticut	Hartford	Trinity College	WRTC(FM)
Connecticut	Middletown	Wesleyan University	WESU(FM)
Connecticut	Storrs	University of Connecticut	WHUS(FM)
District of Columbia		The American University	WAMU(FM)
District of Columbia		Georgetown University	WGTB(FM)
Florida	Gainesville	University of Florida	WRUF(FM)&(AM)
Florida	Miami	Dade County Public Schools	WTHS(FM)
Florida	Tallahassee	Board of Regents of the State of Florida	WFSU(FM)
Florida	Tampa	Florida State Board of Regents	WUSF(FM)
Florida	Winter Park	Rollins College	WPRK(FM)
Georgia	Atlanta	Board of Education of the City of Atlanta	WABE(FM)
Hawaii	Honolulu	The Kamehamela Schools	KVOK(FM)
Idaho	Lewiston	Independent School District #1	KLHS(FM)
Idaho	Moscow	The Regents of the University of Idaho	KUID(FM)
Idaho	Pocatello	Idaho State University	KBGL(FM)
Illinois	Carbondale	Southern Illinois University	WSIU(FM)
Illinois	Chicago	Board of Education City of Chicago	WBEZ(FM)

State	City	Licensee	Call Letters
Illinois	Chicago	Moody Bible Institute of Chicago	WMBI (AM)
Illinois	Chicago	Moody Bible Institute of Chicago	WMBI (FM)
Illinois	Dekalb	Northern Illinois University	WNIC (FM)
Illinois	Elgin	Board of Education School District U-46	WEPS (FM)
Illinois	Elmhurst	Board of Trustees Elmhurst College	WRSE (FM)
Illinois	Evanston	Northwestern University	WNUR (FM)
Illinois	Flossmoor	Community High School District No. 233	WHFH (FM)
Illinois	Galesburg	Knox College	WVKC (FM)
Illinois	Greenville	Greenville College Educational Broadcasting Foundation, Inc.	WGRN (FM)
Illinois	Macomb	Western Illinois University	WWKS (FM)
Illinois	Normal	Illinois State University	WGLT (FM)
Illinois	Park Forest	Rich Township High School East Campus	WRHS (FM)
Illinois	Park Ridge	Maine Township Board of Education	EMTH (FM)
Illinois	Rock Island	Augustana College	WVIK (FM)
Illinois	Urbana	University of Illinois Board of Trustees	WILL (AM)
Illinois	Urbana	University of Illinois Board of Trustees	WILL (FM)
Illinois	Wheaton	Trustees of Wheaton College	WETN (FM)
Illinois	Winnetka	Board of Education, Twp. High School District-203 (New Tier Twp. H. S.)	WNTH (FM)
Indiana	Bloomington	Indiana University Board of Trustees	WFIU (FM)
Indiana	Carmel	Carmel, Clay Schools	WHJE (FM)
Indiana	Evansville	Evansville-Vanderburgh School Corp.	WPSR (FM)
Indiana	Evansville	Evansville College	WEVC (FM)
Indiana	Franklin	Franklin College of Indiana	WFCI (FM)
Indiana	Gary	School City of Gary	WGVE (FM)
Indiana	Goshen	Goshen College Broadcasting Corp.	WGCS (FM)
Indiana	Greencastle	DePauw University	WGRE (FM)
Indiana	Hartford City	School City of Hartford City	WHCI (FM)
Indiana	Huntington	Huntington County Community School Corporation	WVSH (FM)

State	City	Licensee	Call Letters
Indiana	Indianapolis	Board of School Commissioners of the City of Indianapolis	WIAN (FM)
Indiana	Indianapolis	Butler University	WAJC (FM)
Indiana	Indianapolis	Metropolitan School District of Wayne Township	WBGD (FM)
Indiana	Indianapolis	Indiana Central University	WICR (FM)
Indiana	Muncie	Ball State University	WBST (FM)
Indiana	Muncie	Wilson Jr. High School, Muncie Community Schools	WWHI (FM)
Indiana	New Albany	New Albany-Floyd County Consolidated School Corp.	WNAS (FM)
Indiana	Notre Dame	The University of Notre Dame DuLac	WSND (FM)
Indiana	Richmond	Earlham College Board of Trustees	WECI (FM)
Indiana	South Bend	South Bend Community School Corp.	WETL (FM)
Indiana	Terre Haute	Indiana State University Board of Trustees	WISU (FM)
Indiana	Valparaiso	Valparaiso University	WVUR (FM)
Indiana	Wabash	School City of Wabash	WSKS (FM)
Indiana	West Lafayette	Purdue University	WBAA (AM)
Iowa	Ames	Iowa State University	WOI (AM)
Iowa	Ames	Iowa State University	WOI (FM)
Iowa	Boone	Boone Biblical College	KFGQ (AM) & (FM)
Iowa	Cedar Falls	State College of Iowa	KTCF (FM)
Iowa	Decorah	Luther College	KWCL (AM)
Iowa	Des Moines	Des Moines Independent Community School District	KDPS (FM)
Iowa	Iowa City	University of Iowa	WSUI (AM)
Iowa	Iowa City	University of Iowa	KSUI (FM)
Iowa	Mount Vernon	Cornell College	KRNL (FM)
Iowa	Pella	Central College	KCUI (FM)
Iowa	Waterloo	Norhwestern College	KNWS (AM)
Iowa	Waterloo	Northwestern College	KNWS (FM)
Iowa	Waverly	Wartburg College	KWAR (FM)
Kansas	Baldwin	Baker University	KNBU (FM)
Kansas	Emporia	Kansas State Teachers College	KSTE (FM)
Kansas	Lawrence	University of Kansas	KFKU (AM)
Kansas	Lawrence	University of Kansas	KANU (FM)
Kansas	Manhattan	Kansas State University	KSAC (AM)
Kansas	Manhattan	Kansas State University	KSDB (FM)

State	City	Licensee	Call Letters
Kansas	Ottawa	Ottawa University	KTJO (FM)
Kansas	Parsons	Parsons Junior College	KPPS (FM)
Kansas	Wichita	Wichita State University	KMUW (FM)
Kentucky	Georgetown	Georgetown College	WRVG (FM)
Kentucky	Lexington	Board of Trustees, University of Kentucky	WBKY (FM)
Kentucky	Louisville	Louisville Free Public Library	WFPK (FM)
Kentucky	Louisville	Louisville Free Public Library	WFPL(FM)
Kentucky	Morehead	Morehead State College	WMKY (FM)
Louisiana	Lafayette	Univ. S. Louisiana Student Cor.	KRVS(FM)
Maine	Brunswick	Bowdoin College	WBOR(FM)
Maine	Lewiston	Pres. & Trustees of Bates College	WRJR (FM)
Maine	Orono	University of Maine	WMEB (FM)
Maryland	Baltimore	Baltimore Junior College	WBJC (FM)
Maryland	Takoma Park	Columbia Union College	WGTS (FM)
Massachusetts	Amherst	Trustees of Amherst College	WAMF (FM)
Massachusetts	Amherst	WGBH Educational Foundation	WFCR (FM)
Massachusetts	Amherst	University of Massachusetts	WMUA (FM)
Massachusetts	Andover	Trustees of Phillips Academy	WPAA (FM)
Massachusetts	Boston	Trustees, Boston University	WBUR (FM)
Massachusetts	Boston	Emerson College	WERS (FM)
Massachusetts	Boston	WGBH Educational Foundation	WGBH (FM)
Massachusetts	Cambridge	WTBS Foundation, Inc.	WTBS (FM)
Massachusetts	S. Hadley	Mt. Holyoke College, Board of Trustees	WMHC (FM)
Massachusetts	Springfield	Pres. & Trustees of Springfield College	WSCB (FM)
Massachusetts	Springfield	Amer. International College	WAIC (FM)
Massachusetts	Williamstown	Pres. & Trustees of Williams College	WMS (AM)
Massachusetts	Williamstown	Pres. & Trustees of Williams College	WCFM (FM)
Massachusetts	Winchester	Winchester School Dept.	WHSR (FM)
Michigan	Ann Arbor	The University of Michigan	WUOM (FM)
Michigan	Detroit	Bd. of Education of Detroit	WDTR (FM)
Michigan	Detroit	Wayne State University	WDET (FM)
Michigan	E. Lansing	Bd. of Trustees, Mich. State University	WKAR (AM)
Michigan	E. Lansing	Bd. of Trustees, Mich. State University	WKAR (FM)
Michigan	Flint	Flint Bd. of Education, Flint Community Schools	WFBE (FM)
Michigan	Grand Rapids	University of Michigan	WVGR (FM)

State	City	Licensee	Call Letters
Michigan	Highland Park	School District of the City of Highland Park	WHPR-FM
Michigan	Interlochen	Nat'l Music Campe, Interlochen Arts Academy	WIAA-FM
Michigan	Kalamazoo	Western Michigan University	WMUK-FM
Michigan	Marquette	Northern Michigan University	WNMR-FM
Michigan	Mt. Pleasant	Central Michigan University	WCMU-FM
Michigan	Royal Oak	School District of the City of Royal Oak	WOAK-FM
Michigan	Spring Arbor	Spring Arbor College	WSAE-FM
Michigan	Warren	Warren Consolidated Schools	WPHS-FM
Michigan	Ypsilanti	Eastern Michigan University	WEMU-FM
Minnesota	Collegeville	Order of St. Benedict Inc. conducting St. John's University	KSJR-AM
Minnesota	Duluth	Board of Regents, University of Minnesota	KUMD-FM
Minnesota	Mankato	Mankato State College	KMSU-FM
Minnesota	Minneapolis-St. Paul	University of Minnesota	KUOM-AM
Minnesota	Northfield	St. Olaf College	WCAL-AM
Missouri	Buffalo	School District No. 1 Dallas Co.	KBFL-FM
Missouri	Columbia	Stephens College	KWWE-FM
Missouri	Kansas City	Bd. of Curators of the University of Missouri	KCUR-FM
Missouri	Kansas City	Nazarene Theological Seminary Radio Corp.	KSOZ-FM
Missouri	Point Lookout	School of the Ozarks	KSOZ-FM
Missouri	Rolla	University of Missouri System	WMSM-FM
Missouri	St. Louis	St. Louis Board of Education	KSLH-FM
Missouri	Warrensburg	Bd. of Regents, Central Missouri State College	KOMW-FM
Montana	Missoula	University of Montana	KUFM-FM
Nevada	Reno	University of Nevada	KUNR-FM
New Hampshire	Durham	Trustees of University of New Hampshire	WUNH-FM
New Hampshire	Exeter	Trustees of Phillips Exeter Academy	WPEA-FM
New Jersey	East Orange	Upsala College	WFMU-FM
New Jersey	Franklin Lakes	Ramapo Regional High School, District Bd. of Education	WRRH-FM
New Jersey	Glassboro	Glassboro State College	WGLS-FM
New Jersey	Hackettstown	Centenary College for Women	WNTI-FM
New Jersey	Hanover	Hanover Park High School Bd. of Education	WHPH-FM

State	City	Licensee	Call Letters
New Jersey	Newark	Newark Bd. of Education	WBGO-FM
New Jersey	S. Orange	Seton Hall College	WSOU-FM
New Jersey	Trenton	Trenton State College	WTSR-FM
New Mexico	Albuquerque	The Regents of the University of New Mexico	KUNM-AM
New Mexico	Albuquerque	Board of Education	KANW-FM
New Mexico	Las Cruces	New Mexico State University	KRWG-FM
New York	Albany	Albany Medical College of Union University	WAMC-FM
New York	Binghamton	State University of New York at Binghamton	WHRW-FM
New York	Buffalo	State University of New York at Buffalo	WBFO-FM
New York	Canton	The St. Lawrence University	WSLU-FM
New York	Central Square	Central Square Central Schools	WCSQ-FM
New York	Clinton	The Trustees of Hamilton College	WHCL-FM
New York	Elmira	Elmira College	WECW-FM
New York	Floral Park	Bd. of Education, Sewanhaka High School	WSHS-FM
New York	Geneseo	State University of New York	WGSU-FM
New York	Hempstead, L. I.	Hofstra University	WVHC-FM
New York	Ithaca	Cornell University	WHCU-AM
New York	Ithaca	Cornell University	WHCU-FM
New York	Ithaca	Ithaca College	WICB-FM
New York	Loudonville	St. Bernardine of Siena College	WVCR-FM
New York	New York	Pacifica Foundation	WBAI-FM
New York	New York	City of N. Y. Municipal Broadcasting System	WNYC-AM
New York	New York	City of N. Y. Municipal Broadcasting System	WNYC-FM
New York	New York	Bd. of Education, City of N. Y.	WNYE-FM
New York	New York	Fordham University	WFUV-FM
New York	New York	Trustees of Columbia University in the City of N. Y.	WKCR-FM
New York	New York	The Riverside Church in the City of New York	WRVR-FM
New York	Pottsdam	Thomas S. Clarkson Memorial College of Technology	WTSC-FM
New York	Rochester	Bd. of Education Central School District	WIRQ-FM
New York	Rochester	University of Rochester Broadcasting Corp.	WRUR-FM
New York	Springville	Board of Education	WSPE-FM

State	City	Licensee	Call Letters
New York	Syracuse	Syracuse University	WAER-FM
New York	Troy	Rensselaer Polytechnic Instit.	WHAZ-AM
New York	Troy	Rensselaer Polytechnic Instit.	WRPI-FM
North Carolina	Chapel Hill	University of North Carolina	WUNC-FM
North Carolina	Greensboro	The University of North Carolina at Greensboro	WUAG-FM
North Carolina	Greenville	East Carolina College	WWWS-FM
North Carolina	High Point	Bd. of School Commissioners of High Point	WHPS-FM
North Carolina	Raleigh	N. Carolina State University at Raleigh	WKNC-FM
North Carolina	Winston-Salem	Trustees of Wake Forest College	WFDD-FM
North Dakota	Fargo	N. Dakota State University	KDSU-FM
North Dakota	Grand Forks	The University of N. Dakota of Agri.; Applied Science	KFJM-AM
Ohio	Akron	Akron Bd. of Education	WAPS-FM
Ohio	Akron	The University of Akron	WAUP-FM
Ohio	Athens	Ohio University	WOUB-AM
Ohio	Athens	Ohio University	WOUB-FM
Ohio	Berea	Baldwin-Wallace College	WBWC-FM
Ohio	Bowling Green	Bowling Green State University	WBGU-FM
Ohio	Cedarville	Cedarville College	WCDR-FM
Ohio	Cincinnati	University of Cincinnati	WGUC-FM
Ohio	Cleveland	Bd. of Education, Cleveland City School District	WBOE-FM
Ohio	Columbus	Bd. of Education of the City School District of Columbus	WCBE-FM
Ohio	Columbus	The Ohio State University	WOSU-AM
Ohio	Columbus	The Ohio State University	WOSU-FM
Ohio	Delaware	The Trustees of the Ohio Wesleyan University	WSLN-FM WSLN-FM
Ohio	Granville	Denison University	WDUB-FM
Ohio	Kent	Kent State University	WKSU-FM
Ohio	Marietta	The Trustees of Marietta College	WCMO-FM
Ohio	New Concord	Muskingum College	WMCO-FM
Ohio	Oberlin	The Oberlin College Student Network, Inc.	WOBC-FM
Ohio	Oxford	The Pres. & Bd. of Trustees of the Miami University	WMUB-FM
Ohio	Springfield	Bd. of Directors of Wittenberg University	WUSO-FM
Ohio	Struthers	Bd. of Education, Struthers City School District	WKTL-FM

State	City	Licensee	Call Letters
Ohio	Westerville	Otterbein College	WOBN-FM
Ohio	Wilberforce	Central State University	WCSU-FM
Ohio	Yellow Springs	Antioch College	WYSO-FM
Oklahoma	Edmond	Central State College	KCSC-FM
Oklahoma	Norman	University of Oklahoma	WNAD-FM
Oklahoma	Oklahoma City	Independent School District 1-89	KOKH-FM
Oklahoma	Stillwater	The Oklahoma State University	KOSU-FM
Oklahoma	Tulsa	University of Tulsa	KWGS-FM
Oregon	Corvallis	State of Oregon Acting By and Through The State Board of Higher Education	KOAC-AM
Oregon	Corvallis	Oregon State System of Higher Education	KBVR-FM
Oregon	Eugene	School District Four, Lane County	KRVM-FM
Oregon	Eugene	State Bd. of Higher Education State of Oregon	KWAX-FM
Oregon	Klamath Falls	State of Oregon Acting By and Through State Bd. of Higher Education	KTEC-FM
Oregon	Portland	Benson Polytechnic School for Portland Public Schools	KBPS-AM
Oregon	Portland	State of Oregon Acting By and Through State Bd. of Higher Education	KOAP-FM
Oregon	Portland	The Reed Institute	KRRC-FM
Pennsylvania	Allentown	Muhlenberg College	WMUH-FM
Pennsylvania	Beaver Falls	Geneva College-Bd. of Trustees	WVBU-FM
Pennsylvania	Easton	Lafayette College	WJRH-FM
Pennsylvania	Grove City	Grove City College	WSAJ-AM
Pennsylvania	Havertown	School District of Haverford Township	WHHS-FM
Pennsylvania	Lewisburg	Bucknell University	WVBU-AM
Pennsylvania	Meadville	Allegheny Radio Committee	WARC-FM
Pennsylvania	Philadelphia	Philadelphia Wireless Technical Institute	WPWT-FM
Pennsylvania	Philadelphia	Temple University	WRTI-FM
Pennsylvania	Philadelphia	WHYY, INC.	WUHY-FM
Pennsylvania	Philadelphia	University of Pennsylvania	WXPN-FM
Pennsylvania	Pittsburgh	Executive Committee, Duquesne University	WDUQ-FM
Pennsylvania	Reading	Albright College of Evangelical United Brethren Church	WXAC-FM
Pennsylvania	Scranton	University of Scranton	WUSV-FM

State	City	Licensee	Call Letters
Pennsylvania	University Park	The Pennsylvania State University	WDFM-FM
Rhode Island	Kingston	Bd. of Trustees of State Colleges of the State of Rhode Island	WRIU-FM
Rhode Island	Providence	Providence College	WDOM-FM
Rhode Island	Warwick	Bishop Hendricken High School	WBHS-FM
South Carolina	Clemson	Clemson University	WSBF-FM
South Carolina	Columbia	U. of S. Carolina, Ext. Div.	WUSC-FM
South Carolina	Greenville	Bob Jones University	WMUU-AM
South Carolina	Greenville	Bob Jones University	WMUU-AM & FM
South Dakota	Vermillion	University of S. Dakota	KUSD-AM
South Dakota	Sioux Falls	Northwestern College	KNWC-FM
Tennessee	Collegedale	Southern Missionary College	WSMC-FM
Tennessee	Knoxville	Fulton High School, Knoxville City Schools-Bd. of Educ.	WKCS-FM
Tennessee	Knoxville	The University of Tennessee	WUOT-FM
Tennessee	Nashville	Public Library of Nashville and Davidson County	WPLN-FM
Texas	Austin	Bd. of Trustees, Capitol Broadcasting Association, Inc.	KMFA-FM
Texas	Austin	Bd. of Regents for Higher Education-The State of Texas	KUT-FM
Texas	Brownwood	Howard Payne College	KHPC-FM
Texas	Dallas	Texas Trade School	KVTT-FM
Texas	El Paso	Texas Western College of the University of Texas	KVOF-FM
Texas	Ft. Worth	Texas Christian University	KTCU-FM
Texas	Houston	University of Houston	KUHF-FM
Texas	Lubbock	Texas Technological College	KTXT-FM
Texas	Odessa	Odessa College	KOCV-FM
Texas	Plainview	Wayland Baptist College	KHBL-FM
Texas	San Antonio	San Antonio College Bd. of Trustees	-FM
Texas	Waco	Baylor University	KWBU-FM
Utah	Cedar City	College of Southern Utah	KCDR-FM
Utah	Logan	Utah State University of Agric. and Applied Science	KUSU-FM
Utah	Ogden	Weber State College (Bd. of Trustees)	KWCR-FM
Utah	Provo	Brigham Young University	KBYU-FM
Utah	Salt Lake City	University of Utah	KUER-FM
Vermont	Burlington	The University of Vermont	WRUV-FM
Virginia	Charlottesville	University of Virginia	WTJU-FM
Virginia	Chesapeake	Chesapeake School Board	WFOS-FM

State	City	Licensee	Call Letters
Virginia	Hampton	Hampton Institute	WHOV-FM
Virginia	Harrisonburg	Eastern Mennonite College	WEMC-FM
Virginia	Norfolk	Old Dominican College	WMTI-FM
Virginia	Richmond	Union Theological Seminary in Virginia	WRFK-FM
Virginia	Williamsburg	College of William and Mary	WCWM-FM
Virginia	Yorktown	York County School Board	WCYS-FM
Washington	Cheney	Eastern Washington State College	KEWC-FM
Washington	College Place	Bd. of Trustees, Walla Walla College	KGTS-FM
Washington	Ellensburg	Central Washington State College	KCWS-FM
Washington	Pullman	Washington State University	KWSC-FM
Washington	Seattle	The University of Washington	KUOW-FM
Washington	Tacoma	Clover Park School District	KCPS-FM
Washington	Tacoma	Tacoma School District # 10	KTOY-FM
Washington	Tacoma	Pacific Lutheran University Board of Trustees	KPLU-FM
West Virginia	Bethany	Bethany College	WVBC-FM
West Virginia	Huntington	Marshall University	WMUL-FM
Wisconsin	Appleton	Lawrence University	WLFM-FM
Wisconsin	Auburndale	State of Wisconsin, State Radio Council	WLBL-AM
Wisconsin	Beloit	Beloit College	WBCR-FM
Wisconsin	Brule	State of Wisconsin, State Radio Council	WHSA-FM
Wisconsin	Chilton	State of Wisconsin, State Radio Council	WHKW-FM
Wisconsin	Colfax	State of Wisconsin, State Radio Council	WHWC-FM
Wisconsin	Delafield	State of Wisconsin, State Radio Council	WHAD-FM
Wisconsin	Highland	State of Wisconsin, State Radio Council	WHHI-FM
Wisconsin	Holman	State of Wisconsin, State Radio Council	WHLA-FM
Wisconsin	Madison	State of Wisconsin, Univ. of Wisconsin	WHA-AM
Wisconsin	Madison	State of Wisconsin, Univ. of Wisconsin	WHA-FM
Wisconsin	Marinette	State of Wisconsin, State Radio Council	WHMD-FM
Wisconsin	Milwaukee	Regents, Univ. of Wisconsin	WUWM-FM

State	City	Licensee	Call Letters
Wisconsin	Oshkosh	Wisconsin State University	WRST-FM
Wisconsin	Platteville	Wisconsin State University	WSUP-FM
Wisconsin	Ripon	Ripon College (Bd. of Trustees)	WRPN-FM
Wisconsin	Superior	Wisconsin State University	WSSU-FM
Wisconsin	Wausaw	State of Wisconsin, State Radio Council	WHRM-FM
Wisconsin	Whitewater	Wisconsin State University	WSUW-FM
Wyoming	Laramie	University of Wyoming Bd. of Trustees	KUWR-FM

CONSTRUCTION PERMITS

California	Berkeley	University of California	KLAX(FM)
Idaho	Nampa	Northwest Nazarene College	KCRH(FM)
Iowa	Sioux Center	Dordt College	KDCR(FM)
Kentucky	Somerset	Somerset Community College	WSCC(FM)
Michigan	Adrian	Adrian College	WVAC(FM)
New Mexico	Las Cruces	New Mexico State University	KRWG(FM)
Ohio	Ashland	Ashland College	WRDL(FM)
Ohio	Cleveland	Board of Directors, Western Reserve University	WRUW(FM)
Oregon	Eugene	Lane Community College	KPNW(FM)
Pennsylvania	Yorktown	York County School Board	(FM)
South Dakota	Brookings	South Dakota State University	KESD(FM)
Tennessee	Memphis	Christian Brothers College Corporation	WCBD(FM)
Tennessee	Nashville	Trevecca Nazarene College	WNAZ(FM)
Virginia	Lexington	Washington and Lee University Board of Trustees	WLUR(FM)
Pennsylvania	Telford	United Educational Broadcasting, Inc.	WBMR(FM)
Iowa	Davenport	Board of Trustees, St. Ambrose College	(FM)
Tennessee	Henderson	Freed-Hardemann College	(FM)
West Virginia	Buckhannon	West Virginia Wesleyan College	(FM)

APPLICATIONS PENDING

California	Berkeley	University of California
Colorado	Denver	Pillar of Fire Corporation
Illinois	Chicago	University of Chicago
Illinois	Napierville	North Central College
Kentucky	Richmond	Eastern Kentucky University

Minnesota	New Brighton	Order of St. Benedict
Minnesota	St. Cloud	St. Cloud State College
Nebraska	Kearney	Kearney State College
New Jersey	Allendale	Northern Regional High School District
New Jersey	Teaneck	Fairleigh Dickinson University
New York	New York	New York University
Oregon	Portland	Jackstraw Memorial Foundation
Pennsylvania	Selinsgrove	Susquehanna University of Evangelical Lutheran Church
South Dakota	Vermillion	University of South Dakota
Texas	Dallas	Christian Service Association
California	Davis	University of California
Massachusetts	Lowell	Lowell Technical Institute of Massachusetts
Ohio	De Graff	Riverside Local Board of Education
Missouri	St. Charles	Lindenwood Female College

INDIVIDUALS INTERVIEWED FOR STUDY

Seymour N. Siegel, Director of Radio Communications,, WNYC, New York City
Mrs. Cecil Suffern, Assistant Director of Programming, WNYE, New York City
Marie Scanlon, Supervisor, Radio/Television, WBGO, Newark, New Jersey
Martin Busch, Director, KUSD, Vermillion, South Dakota
Myron Curry, Director, KFJM, Grand Forks, North Dakota
James Davis, Associate General Manager, WOI, Ames, Iowa
Elwyn Basquin, Program Director, KDPS, Des Moines, Iowa
Carl Menzer, Director, WSUI, KSUI-FM, Iowa City, Iowa
Alfred Fredette, Manager, WAMC, Albany, New York
Archie Greer, Director of Radio, WOUB, WOUB-FM, Athens, Ohio
Otto Steis, General Manager, WOSU, WOSU-FM, Columbus, Ohio
Albert N. Hulsen, Manager, WFCR, Amherst, Massachusetts
E. G. Burrows, Manager, WUOM, Ann Arbor; WVGR, Grand Rapids, Michigan
Richard Estell, Manager, WKAR, WKAR-FM, East Lansing, Michigan
Dan Logan, Director of Radio, WDET, Detroit
Burton Paulu, Director, Department of Radio/TV, KUOM, Minneapolis-St. Paul, Minnesota
Paul Yeazell, Operations Manager, WMUB, Oxford, Ohio
Fred Criminger, Operations Manager, WSIU, Carbondale, Illinois
John Regnell, Program Director, WILL, WILL-FM, Urbana, Illinois
Donald Ickes, Audio-Visual Director, WNTH, Winnetka, Illinois
Don Wheeler, Program Director, WBKY, Lexington, Kentucky
Jerry Weaver, Director, WNAS, New Albany, Indiana
Will Lewis, Director of Broadcasting, WBUR, Boston, Massachusetts
Dorothy Day, Station Manager, WFPK and WFPL, Louisville, Kentucky

Station Contacts

Donald Holloway, Station Manager, WMKY, Morehead, Kentucky
Jack Burke, Manager, KASC, Manhattan, Kansas
B. C. Dickerson, WCYS, Yorktown, Virginia
WHA: The Wisconsin State Network
    Harry McCarty, Director
    Karl Schmidt, Program Director and Production Manager
    James Kelleher, Director of Taping

WBAA, Lafayette, Indiana
- John De Camp, Station Manager
- Richard Forsythe, Director of Operations
- Warren Siebert, Director of Instructional Media Research

WGUC, Cincinnati, Ohio
- Joseph Sagmaster, Director of Broadcasting
- Jean Mosier, Assistant Manager
- William Burns, Program Manager

John Abel, Program Director, KDSU, Fargo, North Dakota
Keith Kantine, organizer of Sioux City, South Dakota station
Gene King, Director of Radio Communications, State University of New York
Dr. Kenneth D. Wright, Director, WUOT, Knoxville, Tennessee
J. S. McElhaney, Director, Radio/TV Film, KWBU, Waco, Texas
KUER, Salt Lake City, Utah
- Rex Campbell, Director, Radio, TV
- Gene Pack, Production Manager

Mrs. George Probst, Broadcasting Foundation of America

RESPONDENTS TO NER QUESTIONNAIRE

BY CATEGORY

COLLEGES AND UNIVERSITIES - INCLUDING STATE-OWNED FACILITIES

State	City	Licensee	Call Letters	Frequency	Power
Alaska	College	University of Alaska	KUAC(FM)	104.9 mc	2.7kw
California	Pasadena	Pasadena Junior College District	KPCS(FM)	89.3 mc	370w
California	Sacramento	State of California, Sacramento State College	KERS(FM)	88.9 mc	10w
California	San Bernardino	San Bernadino Valley Union Junior College District	KVCR(FM)	91.9 mc	810w
California	San Diego	San Diego State College	KEBS(FM)	89.5 mc	780w
California	San Mateo	San Mateo Junior College District	KCSM(FM)	90.9 mc	375w
Colorado	Greeley	Executive Officers and Judicial Board of Associated Students of Colorado State College	KCBL(FM)	91.3 mc	16w
District of Columbia		The American University	WAMU(FM)	88.5 mc	13.5kw
Florida	Tallahassee	Board of Regents of the State of Florida	WFSU(FM)	91.5 mc	3kw
Florida	Tampa	Florida State Board of Regents	WUSF(FM)	89.7 mc	1kw
Illinois	Dekalb	Northern Illinois University	WNIC(FM)	89.7 mc	2.5kw
Illinois	Normal	Illinois State University	WGLT(FM)	91.7 mc	19.3w
Illinois	Urbana	University of Illinois Board of Trustees	WILL(AM)	580 kc	5kw
Illinois	Urbana	University of Illinois Board of Trustees	WILL(FM)	90.9 mc	300kw
Indiana	Bloomington	Indiana University Board of Trustees	WFIU(FM)	103.7 mc	75kw
Indiana	Muncie	Ball State University	WBST(FM)	90.7 mc	10w
Indiana	West Lafayette	Purdue University	WBAA(AM)	920 kc	5kw
Iowa	Ames	Iowa State University	WOI(AM)	640 kc	5kw
Iowa	Ames	Iowa State University	WOI(FM)	90.1 mc	16kw
Iowa	Iowa City	University of Iowa	WSUI(AM)	910 kc	5kw

State	City	Licensee	Call Letters	Frequency	Power
Iowa	Iowa City	University of Iowa	KSUI(FM)	91.7 mc	17.5kw
Iowa	Pella	Central College	KCUI(FM)	89.1 mc	10w
Kansas	Lawrence	University of Kansas	KFKU(AM)	1250 kc	8kw
Kansas	Lawrence	University of Kansas	KANU(FM)	91.5 mc	108kw
Kansas	Manhattan	Kansas State University	KSAC(AM)	580 kc	5kw
Kansas	Manhattan	Kansas State University	KSDB(FM)	88.1 mc	10w
Kentucky	Lexington	Board of Trustees, University of Kentucky	WBKY(FM)	91.3 mc	2.6kw
Kentucky	Morehead	Morehead State College	WMKY(FM)	91.1 mc	10w
Maine	Lewiston	President and Trustees of Bates College	WRJR(FM)	91.5 mc	10w
Massachusetts	Springfield	President and Trustees of Springfield College	WSCB(FM)	89.9 mc	10w
Michigan	Ann Arbor	The University of Michigan	WUOM(FM)	91.7 mc	230kw
Michigan	East Lansing	Board of Trustees, Michigan State University	WKAR(AM)	870 kc	5kw
Michigan	East Lansing	Board of Trustees, Michigan State University	WKAR(FM)	90.5 mc	125kw
Michigan	Grand Rapids	The University of Michigan	WVGR(FM)	104.1 mc	108kw
Michigan	Kalamazoo	Western Michigan University	WMUK(FM	102.1 mc	39kw
Michigan	Marquette	Northern Michigan University	WNMR(FM)	90.1 mc	344w
Minnesota	Collegeville	Order of St. Benedict Inc. conducting St. John's University	KSJR(FM)	90.1 mc	37.2kw
Minnesota	Duluth	Board of Regents, University of Minnesota	KUMD(FM)	89.1 mc	250w
Minnesota	Minneapolis/ St. Paul	University of Minnesota	KUOM(AM)	770 kc	5kw
Missouri	Kansas City	Board of Curators of the University of Missouri	KCUR(FM)	89.3 mc	40.098 kw

State	City	Licensee	Call Letters	Frequency	Power
Montana	Missoula	University of Montana	KUFM(FM)	88.1 mc	28.5w
New Hampshire	Durham	Trustees of University of New Hampshire	WUNH(FM)	90.3 mc	10w
New Mexico	Albuquerque	The Regents of the University of New Mexico	KUNM(FM)	90.1 mc	3.5kw
New York	Buffalo	State University of New York at Buffalo	WBFO(FM)	88.7 mc	770w
New York	Canton	St. Lawrence University	WSLU(FM)	89.3 mc	8.5kw
New York	Elmira	Elmira College	WECW(FM)	88.1 mc	10w
New York	Geneseo	State University of New York	WGSU(FM)	88.1 mc	8w
New York	Hempstead, L.I.	Hofstra University	WVHC(FM)	88.7 mc	320w
New York	Syracuse	Syracuse University	WAER(FM)	88.3 mc	3.5kw
North Carolina	Raleigh	North Carolina State University at Raleigh	WKNC(FM)	88.1 mc	10w
North Carolina	Winston-Salem	Trustees of Wake Forest College	WFDD(FM)	88.1 mc	10w
North Dakota	Fargo	North Dakota State University	KDSU(FM)	91.9 mc	1.26kw
North Dakota	Grand Forks	The University of North Dakota	KFJM(AM)	1370 kc	1kw
Ohio	Athens	Ohio University	WOUB(AM)	1340 kc	250w
Ohio	Athens	Ohio University	WOUB(FM)	91.5 mc	10w
Ohio	Bowling Green	Bowling Green State University	WBGU(FM)	88.1 mc	1.35kw
Ohio	Cincinnati	University of Cincinnati	WGUC(FM)	90.9 mc	5.3kw
Ohio	Columbus	The Ohio State University	WOSU(AM)	820 kc	5kw
Ohio	Columbus	The Ohio State University	WOSU(FM)	89.7 mc	14kw
Ohio	Kent	Kent State University	WKSU(FM)	89.7 mc	7.5kw
Ohio	Marietta	The Trustees of Marietta College	WCMO(FM)	89.3 mc	10w
Ohio	Oberlin	The Oberlin College Student Network, Inc.	WOBC(FM)	88.7 mc	14w
Ohio	Oxford	The President and Board of Trustees of the Miami University	WMUB(FM)	88.5 mc	830w

State	City	Licensee	Call Letters	Frequency	Power
Oklahoma	Stillwater	The Oklahoma State University	KOSU(FM)	91.7 mc	219w
Oklahoma	Tulsa	Oral Roberts University	KORU(FM)	103.3 mc	100kw
Oregon	Corvallis	State of Oregon Acting By and Through The State Board of Higher Education	KOAC(AM)	550 kc	5kw
Oregon	Portland	State of Oregon Acting By and Through The State Board of Higher Education	KOAP(FM)	91.5 mc	57kw
Pennsylvania	Pittsburgh	Executive Committee, Duquesne University	WDUQ(FM)	91.5 mc	2.75kw
Pennsylvania	Reading	Albright College of Evangelical United Brethren Church	WXAC(FM)	91.3 mc	16w
Pennsylvania	University Park	The Pennsylvania State University	WDFM(FM)	91.1 mc	500w
South Dakota	Vermillion	University of South Dakota	KUSD(AM)	690 kc	1kw
Tennessee	Knoxville	The University of Tennessee	WUOT(FM)	91.9 mc	68kw
Texas	El Paso	Texas Western College of the University of Texas	KVOF(FM)	88.5 mc	10w
Texas	Houston	University of Houston	KUHF(FM)	91.3 mc	9.8kw
Texas	Odessa	Odessa College	KOCV(FM)	91.3 mc	5kw
Texas	Plainview	Wayland Baptist College	KHBL(FM)	88.1 mc	10w
Utah	Salt Lake City	University of Utah	KUER(FM)	90.1 mc	1.1kw
Vermont	Burlington	The University of Vermont	WRUV(FM)	90.1 mc	10w
Virginia	Williamsburg	College of William and Mary	WCWM(FM)	89.1 mc	12w
Washington	Ellensburg	Central Washington State College	KCWS(FM)	91.5 mc	10w
Washington	Pullman	Washington State University	KWSC(AM)	1,250 kc	5kw
Washington	Seattle	The University of Washington	KUOW(FM)	94.9 mc	86kw
Washington	Tacoma	Pacific Lutheran University Board of Trustees	KPLU(FM)	88.5 mc	11w
West Virginia	Bethany	Bethany College	WVBC(FM)	88.1 mc	10w

State	City	Licensee	Call Letters	Frequency	Power
Wisconsin	Appleton	Lawrence University	WLFM(FM)	91.1 mc	10.5kw
Wisconsin	Auburndale	State of Wisconsin, State Radio Council	WLBL(AM)	930 kc	5kw
Wisconsin	Brule	State of Wisconsin, State Radio Council	WHSA(FM)	89.9 mc	37.8kw
Wisconsin	Chilton	State of Wisconsin, State Radio Council	WHKW(FM)	89.3 mc	51.7kw
Wisconsin	Colfax	State of Wisconsin, State Radio Council	WHWC(FM)	88.3 mc	50kw
Wisconsin	Delafield	State of Wisconsin, State Radio Council	WHAD(FM)	90.7 mc	74.2kw
Wisconsin	Highland	State of Wisconsin, State Radio Council	WHHI(FM)	91.3 mc	42.8kw
Wisconsin	Holman	State of Wisconsin, State Radio Council	WHLA(FM)	90.3 mc	38.3kw
Wisconsin	Madison	State of Wisconsin, University of Wisconsin	WHA(AM)	970 kc	5kw
Wisconsin	Madison	State of Wisconsin, University of Wisconsin	WHA(FM)	88.7 mc	72kw
Wisconsin	Marinette	State of Wisconsin, State Radio Council	WHMD(FM)	91.5 mc	1.9kw
Wisconsin	Oshkosh	Wisconsin State University	WRST(FM)	88.1 mc	10w
Wisconsin	Superior	Wisconsin State University	WSSU(FM)	91.3 mc	320w
Wisconsin	Wausaw	State of Wisconsin, State Radio Council	WHRM(FM)	91.9 mc	74.8kw
Wyoming	Laramie	University of Wyoming Board of Trustees	KUWR(FM)	91.5 mc	15w

PUBLIC SCHOOLS AND LIBRARIES

State	City	Licensee	Call Letters	Frequency	Power
California	Long Beach	Board of Education, Long Beach Unified School District	KLON(FM)	88.1 mc	1.2kw
Idaho	Lewiston	Independent School District No. 1 of Nez Perce County Idaho	KLHS(FM)	89.1 mc	11.1w
Illinois	Elgin	Board of Education School District U-46	WEPS(FM)	90.9 mc	364w
Illinois	Park Ridge	Maine Township Board of Education	WMTH(FM)	88.5 mc	16w
Indiana	Evansville	Evansville-Vanderburgh School Corp.	WPSR(FM)	90.7 mc	4.5kw
Indiana	Gary	School City of Gary	WGVE(FM)	88.7 mc	295w
Indiana	Hartford City	School City of Hartford City	WHCI(FM)	91.9 mc	10w
Indiana	Indianapolis	Board of School Commissioners of the City of Indianapolis	WIAN(FM)	90.1 mc	10kw
Indiana	Indianapolis	Metropolitan School District of Wayne Township	WBDG(FM)	90.9 mc	10w
Indiana	Muncie	Wilson Jr. High School, Muncie Community Schools	WWHI(FM)	91.5 mc	10w
Indiana	New Albany	New Albany-Floyd County Consolidated School Corporation	WNAS(FM)	88.1 mc	800w
Indiana	South Bend	South Bend Community School Corp.	WETL(FM)	91.9 mc	290w
Iowa	Des Moines	Des Moines Independent Community School District	KDPS(FM)	88.1 mc	5.2kw
Kentucky	Louisville	Louisville Free Public Library	WFPK(FM)	91.9 mc	3kw
Kentucky	Louisville	Louisville Free Public Library	WFPL(FM)	89.3 mc	250w
Michigan	Detroit	Board of Education of Detroit	WDTR(FM)	90.9 mc	17kw
Michigan	Flint	Flint Board of Education, Flint Community Schools	WFBE(FM)	95.1 mc	3.7kw

State	City	Licensee	Call Letters	Frequency	Power
Michigan	Royal Oak	School District of the City of Royal Oak	WOAK(FM)	89.3 mc	10w
Missouri	St. Louis	St. Louis Board of Education	KSLH(FM)	91.5 mc	12.5kw
New Jersey	Newark	Newark Board of Education	WBGO(FM)	88.3 mc	20kw
New Mexico	Albuquerque	Board of Education	KANW(FM)	89.1 mc	350w
New York	Central Square	Central Square Central Schools	WCSQ(FM)	89.3 mc	1.5kw
New York	New York	Board of Education, City of New York	WNYE(FM)	91.5 mc	20kw
Ohio	Cleveland	Board of Education, Cleveland City School District	WBOE(FM)	90.3 mc	15kw
Ohio	Columbus	Board of Education of the City School District of Columbus	WCBE(FM)	90.5 mc	10.5kw
Ohio	Struthers	Struthers High School, Struthers City School District	WKTL(FM)	90.7 mc	328w
Oregon	Eugene	School District Four, Lane County	KRVM(FM)	91.9 mc	320w
Oregon	Portland	Benson Polytechnic School for Portland Public Schools	KBPS(AM)	1,450 kc	250w
Tennessee	Nashville	Public Library of Nashville and Davidson County	WPLN(FM)	90.3 mc	15kw
Washington	Tacoma	Clover Park School District	KCPS(FM)	90.9 mc	550w

OTHER - INCLUDING PRIVATE NON-PROFIT ORGANIZATIONS, RELIGIOUS INSTITUTIONS, FOUNDATIONS

State	City	Licensee	Call Letters	Frequency	Power
California	Berkeley	Pacifica Foundation	KPFA(FM)	94,1 mc	59kw
California	Los Angeles	Pacifica Foundation	KPFK(FM)	90.7 mc	110kw
Massachusetts	Amherst	WGBH Educational Foundation	WFCR(FM)	88.5 mc	34.4kw
Massachusetts	Boston	WGBH Educational Foundation	WGBH(FM)	89.7 mc	50kw
New York	New York	Pacifica Foundation	WBAI(FM)	99.5 mc	50kw
New York	New York	The Riverside Church in the City of New York	WRVR(FM)	106.7 mc	19kw
Pennsylvania	Philadelphia	WHYY, Inc.	WUHY(FM)	90.9 mc	20kw

PLEASE RETURN TO:
National Educational Radio
(Address)

INDICATE Name (Call Letters) of Station,
Institution, Address, Name & Title of
Person Submitting Questionnaire

I. STATION MANAGEMENT

A. The Organization of the Station

1. Who is the legal licensee of the Station? (If the title is not self-explanatory, please give a description of the organization or individual.)

2. Does the licensee have other broadcasting interests? Yes. No. (If Yes, explain)

3. How active is the licensee in the operation of your station? Indicate by check mark...Daily supervision? Reported to weekly? Reported to monthly or less?

4. To what degree does the licensee participate in decisions of policy on: Programming; Personnel; Equipment; Budget (Indicate "A Great Deal"; "Somewhat", "Very Little".)

5. If additional funds, funds outside those regularly provided by the licensee for the operation of the station, are sought out; where and how are they sought? (Answer should provide information on additional operating funds, capital funds, and program acquisition funds.)

6. Please furnish, on a separate sheet of paper, a rough table of organization of your station, starting with the licensee and including all fulltime and parttime paid employees, as well as students.
   On a separate sheet, please provide job descriptions and the approximate weekly salary paid to each. If you already have a printed table of organization and/or job description sheet, please label as relating to this question and attach. The salary figures should relate (as do all dollar and program questions) to the week of November 14-20, 1966.

7. Is the Station Manager (or Program Director; regardless of title), the person who reports to the licensee: Full-time? Part-time?

8. In the case of all paid employees who are parttime, please indicate below, which ones. What are their other functions (teaching, housewife, etc.)? How much time do they devote to each function? Category breakdown: "Position", "Other Function", "Weekly Hours Devoted to Station" - Other Function".

9. Are your facilities used by students for course work in training for broadcasting? Please specify courses and, when applicable those that relate to educational broadcasting.

10. What was the operating schedule of your station during the week of November 14-20. (Chart entitled "Operating Schedule", indicating days of the week M-Sun for the AM and FM outlets.)

11. Other than changes in local sunset (if you are licensed to operate daytimes only), do you alter your operating schedule during the summer months (school vacation time)? Yes. No. If Yes, In what way?

B. The Station and the Community

'Community' or 'service area' for purposes of this questionnaire, refers to primary coverage area; that area on which you concentrate your main efforts. The best definition would be the 5mvm contour as it appears on your coverage map. If for any reason you are defining your service area otherwise, please explain. If your primary service area is a local school system please so identify.

12. Do you carry programs provided by local, state, or national community organizations (PTA, Library, Veterans' organizations, etc.)? Yes. No. If Yes - Please list the organization, type of program, (such as interviews, discussions, drama, etc.) when heard (daily, weekly, biweekly, etc.).
Chart provided indicating categories: "Organization", "Type of Program", "Regularly Scheduled".

13. Are you asked to produce (or help produce) programs by outside organizations? Yes. No. Unable to when asked. If you check both "Yes" and "Unable" please explain why "unable" in a short statement on the other side of this page or attached sheet. If "Yes", please list these organizations under the proper headings below (please be complete -- use separate sheet if necessary. (Categories provided: "Local Organizations"; "State and Regional Organizations"; "National and International Organizations".)

14. Please list the community organizations to which your station personnel, either full or part-time, belong. (Categories provided: "Staff Member (title); "Organization"; "Organization Title Held (if any)".)

15. Which professional organizations do you or members of your staff belong to (NAEB-NER, IRTS, APBE, IBS, etc.)? (Categories provided: "Staff Member (title)"; "Organization" "Category of NAEB-NER Membership (with breakdown)".)

16. During the year ending November 30, 1966, what locally originated public affairs or community service programs (or series) did you put on the air? Please describe on separate sheets in detail covering purpose, content and treatment, scheduling, and any indications of impact and audience reaction. (Categories indicated: "Program(s)"; "Subject Matter".)

17. What plans do you have for community service programs in the future? Are any of them contingent on factors outside your control? Please be specific.

18. In what way do you determine the needs of your service area? (Please be specific.)

19. Approximately how many letters (or post cards, personal visits, or telephone calls -- please indicate by category) did your station receive during the year ending November 30, 1966? (Your best estimate.) Attach copies of letters representative of each type please. Mail. Calls. Visits. Comments on Programs; Requests for Program Information; (including course guides); General Favorable Comments; General Unfavorable Comments.

20. Please enclose several samples of representative press comment your station has received during the year ending November 30, 1966.

21. Do you maintain formal contact or correspondence with community leaders? Yes. No. If Yes, with what types of leaders, in what communities, and what kind of contact? (Categories provided: "Place"; "Person or Group"; "Type of Communication"; "Frequency of Communication".)

22. Do these contacts influence your program planning? If so, in what way?

23. Does your station have an Advisory Board or Committee? Yes. No. If Yes, please attach sheet giving the organizational affiliations and titles of the members of it. How often does this group meet?

C. The Area Served

24. (a) What is the population of your city of license?
1960 Census (if available) Other (identify)

(b) What is the population of your service area?
1960 Census (if available) Other (identify)

25. What are the cities or towns over 2,500 population in the counties of your station area? Place. Population.

26. How much population is in places under 2,500?

27. If applicable to your service area, please estimate: How many people live on Farms? How many Farms in your area? Average Size of Farm. Total Farm Income-$.

28. How many FM homes are in your area? (Estimate) (Source) If possible, please estimate percentage of FM set penetration in your area.

29. Approximately how many children are enrolled in Elementary Schools in your area. Number of Students. Number of Schools.

30. How many are enrolled in High Schools? Number of Students. Number of Schools.

31. How many of High School age (14-18 years) are not enrolled in High Schools?

32. Are there any significantly sized minority groups -- national, racial, religious -- in your area? Yes. No. If Yes, identify - and give size. (Categories provided: "Group"; "Number".)

33. Are there any other Educational Radio stations serving any significant parts of your area? Yes. No. If Yes, Which Ones? Where are they located?

34. Are there any commercial stations in your area devoting any significant amount of time to cultural programming? Yes. No. If Yes (Categories provided: "Station"; "Location"; "Kind of Cultural Programming".)

35. Are there any Educational TV stations serving any significant parts of your area? Yes. No. If Yes, Which Ones? Where are they located?

D. Research

36. (a) Do you conduct studies . . on size of student audience? composition of audience? program effectiveness? other? (if yes, please specify.) Please attach representative copy of such research.

(b) What other evidence do you have besides mail of audience response to your station -- such as audience surveys made by disinterested groups and rating services? If you have such surveys, please attach representative copy.

E. Promoting the Station

37. Do you publish the details of your programs in advance in any form? Yes. No. If Yes, In what form? (Please enclose sample)

38. To whom is this program listing distributed?

39. How many copies?

40. In how many newspapers in your station area are your program listings published in full or in part?

41. What is the approximate total circulation of these newspapers? Dailies. Weeklies.

42. What other means of publicizing your program schedules do you use? Describe.

43. Do you maintain mailing lists of persons influential in the various communities to whom you address releases about your station's activities? Yes. No. If Yes, What kinds of persons? How many on the list?

44. How many people are assigned to the promotion function? Full Time. Part Time.

F. Operation of the Station

45. Other than budget, are there any restrictions on your right to hire and fire? (Civil Service, Unions, student employment, etc.)

46. Again within the limits of your budget, are your decisions on matters of personnel, equipment and policy subject to any prior approval by the legal licensee (or the person or group to whom you are directly responsible?) Yes. No. If Yes, What types of decisions and who must give approval?

47. Who actually pays bills incurred by your station. Title?

G. The Budget

48. How far in advance of your fiscal year is the upcoming budget prepared?

49. If teachers, lecturers, or other outside talent are used for programs, are they paid? Always. Sometimes. Never. If paid, by whom? The Station? The School Board of College? Philanthropic Funds? Government Agencies? Other (describe).

50. If you have answered the previous question in the affirmative, then what is the range and average of such fees paid for programs on your station? (Categories provided: "Type of Talent"; "Number of Broadcasts"; "Fee Paid" -- on each info requested is "highest"; "lowest"; "average".)

51. Listed below are the major items of a station budget. Please fill in the first column with the figures which apply to your current operation (fiscal or calendar year) --

FUNDS:		Present Budget	Future Budget (Question #116)
	(from College, School Board, State Board of Education, etc.)		
	(from sources such as Foundations, Federal or State Agencies, etc.)		
	(from rental of equipment and personnel or program and services provided to others)		
	(Other)		
	TOTAL REVENUES		

OPERATING COSTS:		Present Budget	Future Budget (Question #116)
	Total Employee Salaries (including part-time)		
	Program Purchases		
	Talent Fees		
	Equipment		
	Engineering		
	Research		
	Promotion		
	Rent, Heat, Light (if applicable)		
	Depreciation & Amortization (if applicable)		
	Other		
	TOTAL EXPENSE		

52. How large a contingency fund do you have?

53. What action is necessary to provide for items not specified in the current budget?

II. PROGRAMMING

A. Scheduling

54. On your program guide, or log, or separate sheets, please classify all programs scheduled on your station during the week of November 14-20, 1966, using the following designations:

IS	In-School Programming
AH	At-Home Instruction (formal, for credit)
FP	Farm Programming
PM	Popular Music
SM	Serious Music
OM	Other Music (folk, jazz)
N	News
NA	News Analysis
W	Weather
R	Religious
CA	Community Affairs (local events)
PA	Public Affairs
SH	Self-Help (homemaking, gardening, consumer guidance, etc.)
SA	Special Audiences (ethnic, religious, racial, etc.)
SS	Specialized Services (medical, literacy, poverty, etc.)

55. Please enclose a copy of your Program Schedule for the week of November 14 - 20, 1966, with each program identified as follows:

LS	Live Origination (Studio)
LR	Live Origination (REMOTE)
LPD	Locally Produced Documentary
TS	Taped - Studio
TR	Taped - Remote
TE	Taped - Exchanges with Other Stations
TN	Taped - NER Program
TOS	Taped - Other Domestic Station (BFA, IBS, etc.)
TF	Tape - Foreign, as BBC, CBC, Radio Nederland, etc.
FR	Disc Recordings - Foreign
R	Recordings (Disc)

56. With how many schools in your area do you have arrangements for instructional programming? (Where are they located? How many students are involved in this instruction?) Week of November 14-20, 1966.) Indicate "Location", "Number of Schools", "Number of Classes", "Number of Students", in the following categories: Home City and County; Other Cities in Area; Large Towns in Area; Small, Rural Communities in Area.

57. Do you feel that the number of students involved in Radio In-School programming in the last five years has: Increased faster than School Enrollments? Kept pace with School Enrollments? Fallen behind School Enrollments?

58. Are there any formal advisers on programming outside your staff, either individuals or groups, who assist in planning in-school programs? Yes. No. If Yes, please describe.

59. In your opinion, how could the volume of in-school participants be most readily increased?

60. What would you do, if funds were available, to improve the calibre of your present in-school programs?

61. How much do you estimate this would cost per year?

62. How many programs did you exchange with other stations during the year ending November 30, 1966? Number. Hours.

63. With which stations did you exchange programs?

64. In addition to those stations with which you exchanged programs, please list all educational or commercial stations (separate lists, please for educational and commercial and include call letters) to which you supplied programs in the year ending November 30, 1966.

65. If you have supplied programs to commercial stations, do you have any evidence (surveys, letters, comments) on the use and effectiveness of these programs? If so, please enclose copies.

66. Roughly how many hours of programming did you schedule in that same year from such outside sources as NER, BFA, CBC, BBC, commercial networks and stations, etc.? Source. Number of Hours. Total percentage of Total Hours on Air? Please list programs and sources on separate sheet.

67. Do you loan or sell program material on tape to local organizations -- PTAs, Civic Groups, Schools, etc.? Yes. No. If yes, what groups?

B. Programming Staff

68. Are any members of your staff taking courses for credit? Yes. No. If Yes, What are their functions and how many hours do they work at the station, at what salary, if any? (Categories provided in chart: "Function"; "Hours per Week at Station"; "Approximate Weekly Salary"; "Field of Study".)

69. What is the number of years of experience in Radio represented by the members of your staff? Position and years experience of: General Manager, Program Director, Chief Engineer, Promotion Director, Music Director, News Director, Other Engineers, Other.

70. Do any of your program staff serve in any other station function? Yes. No. If yes, in what capacities do they serve? Staff Title...Also Works As...

71. Are there any functions at your station (excluding engineers) which are not adequately staffed? Yes. No. If yes, which functions? Who is needed at what salary? (Categories provided: "Title"; "Person Needed"; "Salary".)

72. Have you received grants for programming purposes? Yes. No. If Yes, what sources, what purpose? (Furnish "Amount", "When?")

C. Equipment

73. Where are your studios located? (Own building, shared with transmitter, space in school, etc.)

74. How large a musical aggregation (choir, chorus, orchestra) can your largest studio accommodate?

75. Is the station equipped with basic musical instruments, as grand piano, electric organ? Yes. No. If No, what instruments are lacking?

76. Have you facilities -- studio area, enough microphones, sound effects, etc -- to produce dramatic shows? Yes. No. If no, what do you lack?

77. Have your News Room adequate facilities -- space, desks, typewriters, file capacity, etc.? Yes. No. If No, what do you lack?

78. Have you sufficient remote equipment -- tape recorders, microphones, amplifiers, etc. -- to cover more than one remote event at a time. Yes. No. If no, what equipment do you lack?

III. THE STATION FACILITIES

A. General

79. Frequency. Power (FM-ERP) (AM). Antenna Hgt. (FM Only)

80. Transmitter Site.

81. How close is this to the principal population center served? Miles.

82. Make, model and age of Transmitter.

83. Transmitter Power Output

84. Is the Transmitter in: its own building? same building with studios and offices of the station? Other (describe).

85. What class telephone lines connect the studios and transmitter?

86. What microwave facilities do you use?

87. Do any of these studios have facilities for a live audience? Yes. No. If Yes, how many can be accommodated?

88. How many control rooms have you?

89. What are the most frequent technical causes of interruptions to broadcasting or recording at your station? (Answers might range from power failure, arc overs, tube blowouts, to peculiar weather conditions).

90. If personnel failure (unscheduled coffee-breaks, failure to heed the end of a record, etc.) is a major factor, please specify in what way.

91. Do you encounter any serious interference to your signal? Yes. No. If Yes, what kind of interference?

B. If FM Station

92. Are you broadcasting in Stereo? Yes. No.

93. Do you hold an SCA (Subsidiary Communications Authorization)? Yes. No.

94. How many channels are you using? (If more than one) For what purposes are the additional channels used?

95. Have you plans for acquiring an SCA? Yes. No. If Yes, for what purposes?

96. Do you use other than multiplex channels (short-wave)? Yes. No. If Yes, for what purposes?

97. What equipment do you use for studio recording and playback of audio tape? (Please describe.)

98. What equipment do you use specifically for tape duplication? (Please describe.)

99. Do you regularly maintain broadcast loops between your studios and any other location? Yes. No. If Yes, please describe.

100. Do you have facilities for monitoring police, aircraft and emergency facilities? Yes. No.

101. Do you have short-wave equipment for monitoring overseas broadcasts? Yes. No.

102. Do you maintain any mobile two-way communications equipment? Yes. No. If Yes, please describe.

103. Are any elements of your broadcasting equipment -- transmitter or studio -- automated? Yes. No. If Yes, please describe.

104. How would you grade your present technical facilities? Excellent. Good. Fair. Poor.

105. Do you have equipment, or funds for equipment, available from any sources other than the regular station budget? Yes. No. If Yes, please describe.

106. Please attach a coverage map.

C. The Engineering Staff

107. How many did you have on your staff during the week of November 14-20, 1966? (Indicate number of Full Time and Part Time at Transmitter, and at Studios.)

108. How many on your staff hold licenses? What Class? (Indicate how many Full Time and Part Time, and the Class of License.)

109. If you do not consider your present staff adequate in numbers of experience, what do you believe would be necessary to be added? At what approximate weekly salaries?

D. The Future of the Station

110. From the standpoint of an engineer, what do you feel would be the most useful changes or additions in your department and facilities (new transmitter, stereo capability, multiplexing, mobile equipment)?

IV. THE FUTURE

111. Do you now belong to a network of Educational Radio Stations in your general area? Yes. No. Describe.

112. Regardless of your answer to the preceding, have you plans to: Join? Originate such a Network? Please specify.

113. (a) Are you now providing programming services to specialized audiences, such as: children or adults unable to attend school, old people, parents of retarded children, the blind, the handicapped, physicians, teachers, other professionals, city and state departments, etc.? Yes. No.

(b) If yes, please provide detailed information on separate sheet.

(c) If yes, are you providing these services via: Main channel. Multiplex (SCA)

(d) If yes, do you plan to increase the number and range of such services? Please answer in detail.

(e) If no, are you planning to begin such services? Yes. No. What kind and when? Please answer in detail.

(f) Do your future plans to serve specialized audiences envision use of multiplex or other new technological methods? Yes. No. Please specify.

(g) How much do you estimate it would cost to provide such new services? Technical $__ (please specify if SCA) Staff____. Other Programming costs_____.

114. What plans do you have for such auxiliary services? When will they be in effect?

115. If money, personnel, and equipment were not factors, what such plans would you like to institute in your area? What are the factors holding back (please be specific) implementation of your ideas?

116. Based on what you have just said above in question 113, please go back to the Budget question and fill in opposite current figures (Question #51) what you believe would be needed to realize your goals for your station, if you had the funds available.

117. Please make sure that we have, even though it has not been specifically requested as an individual question, all available information about the following: Multiple Transmitters:
Same licensee -- Separate licensee. Please explain.
Interconnections between stations? Please explain any and all interconnects.
Do you duplicate AM and FM programming when the same licensee holds licenses for both? If you don't please see to it that we have adequate program and other applicable information on the difference.
Have you any plans for acquisition of additional transmitters? Repeaters?
If so, where will these be located vis-a-vis the physical location of the original facility? (Please take as much additional space as you need to complete this question.)

Undoubtedly, we have failed to touch on some points unique to your station or views exclusive to you and your staff. Please use the reverse side of this page (and as many more sheets as you need) to complete the picture of Educational Radio we have tried to elicit here.

Many thanks.

PLEASE RETURN THIS QUESTIONNAIRE TO:
National Educational Radio
1346 Connecticut Avenue, N. W.
Washington, D. C. 20036

NOTE RE QUESTIONNAIRE:

In coding and tabulating replies to the questions on programming (Page Q-8, Questions 54 and 55), it became necessary to add the following unlisted categories:

- Sports
- The Arts
- General Information
- General Instruction